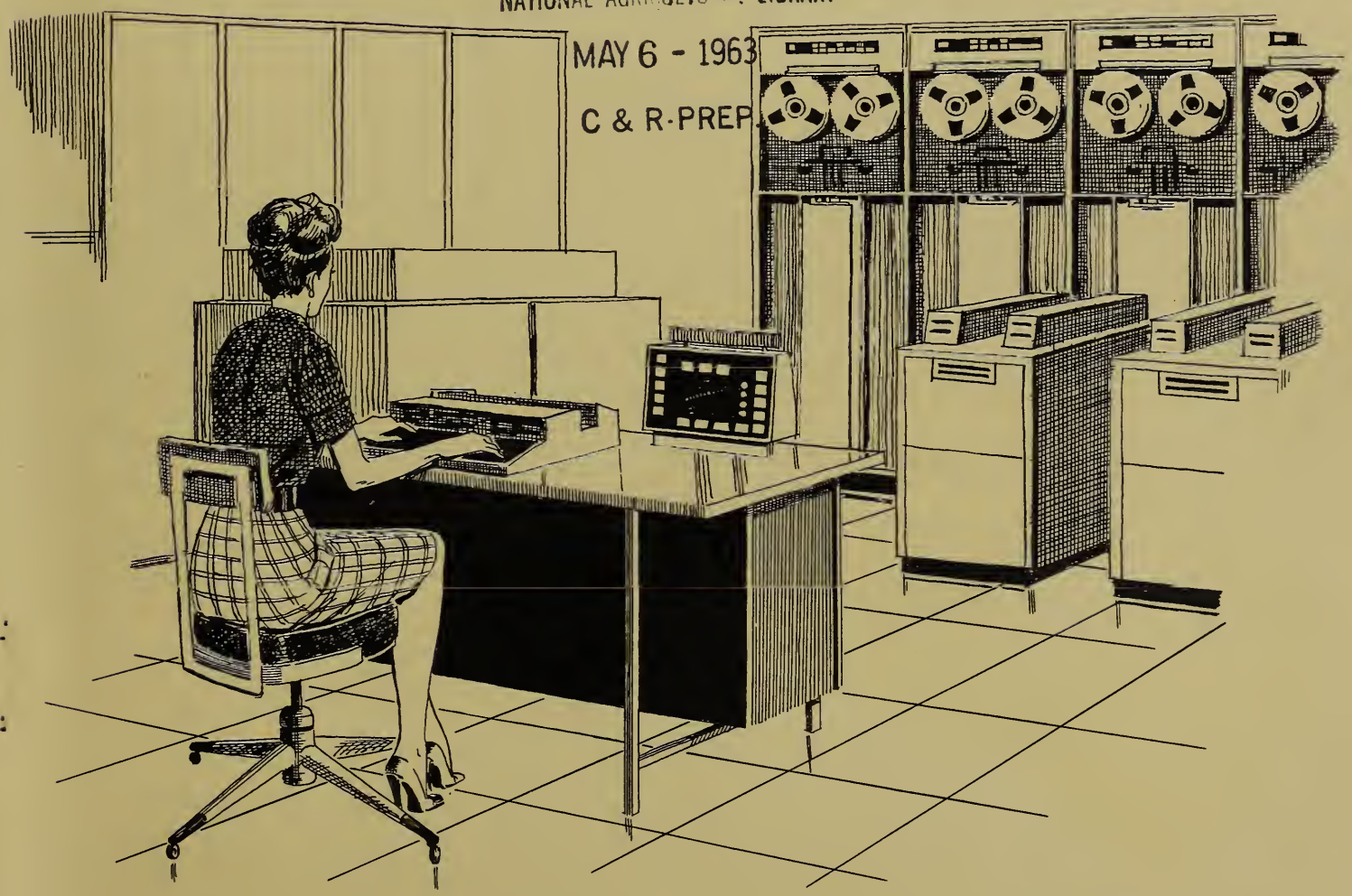
MODE | A NEW APPROACH TO PUBLIC MANAGEMENT



Preliminary Report September 1961

UNITED STATES DEPARTMENT OF AGRICULTURE

PREPARED BY THE ADP STUDY GROUP

under the direction of

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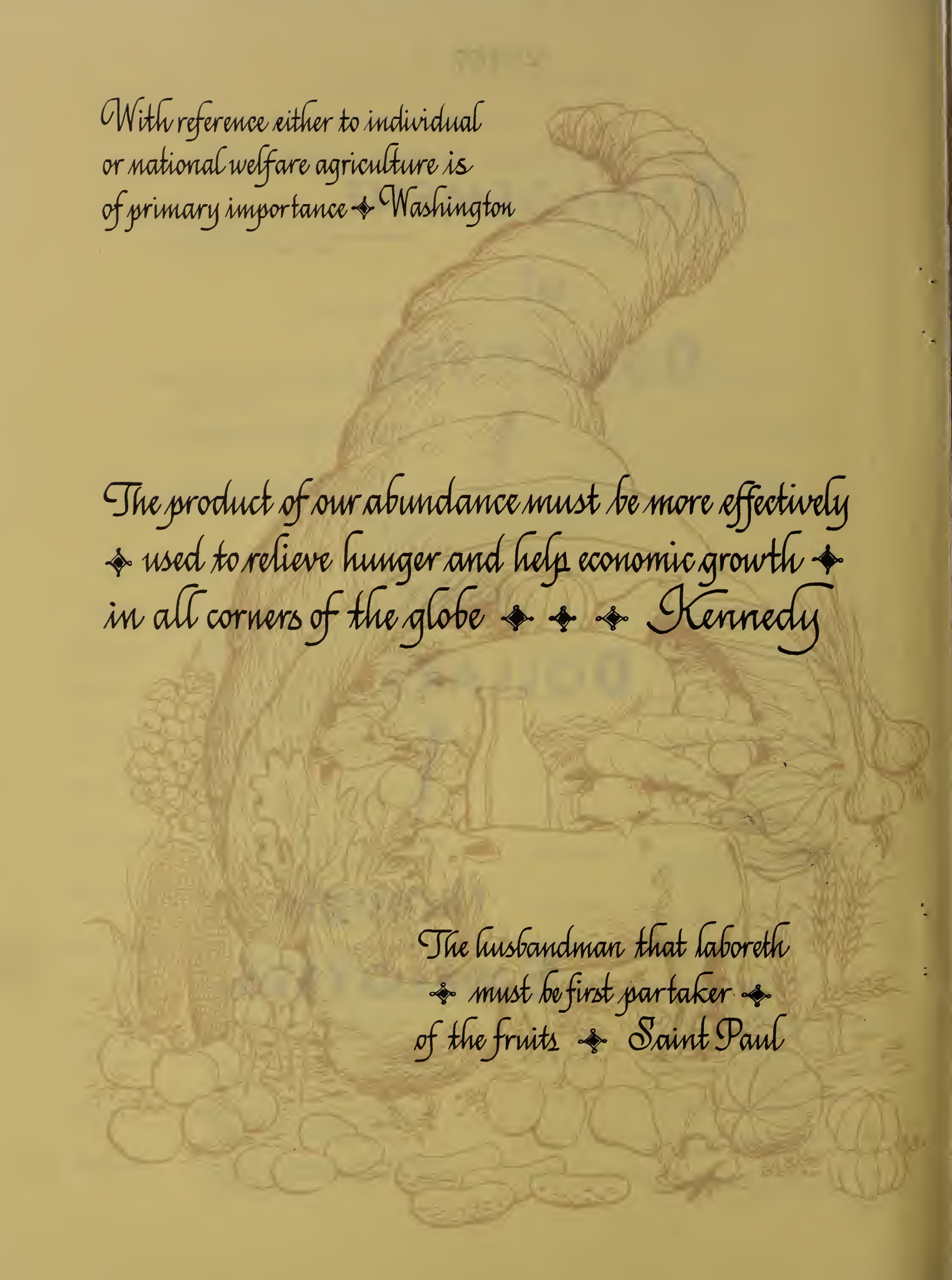
MANAGEMENT of OBJECTIVES with DOLLARS through EMPLOYEES



With reference either to individual
or national welfare agriculture is
of primary importance ✦ Washington

The product of our abundance must be more effectively
✦ used to relieve hunger and help economic growth ✦
in all corners of the globe ✦ ✦ ✦ Kennedy

The husbandman that laboreth
✦ must be first partaker ✦
of the fruits ✦ Saint Paul

SUMMARY

Management of **O**bjectives with **D**ollars through **E**mployees is an idea for using money and employees more effectively with the help of an automatic data processing system. The system will service employees and provide new tools for management. To do so, it uses the experiences of the past to provide the needs of the present—and to respond to plans for the future.

Past

From the past came the experience of the Department's own employees—from accounting, automatic data processing, budget, operations research, payroll, personnel, statistics, and system design. Added were experiences from industry's and government's automatic data processing systems in the fields of payroll and personnel. These experiences were the beginning of a self-appraisal. It started the 1st of August; it was completed the 1st of September. In one month the problem was analyzed and the solution found.

Present

For the present, the system integrates three areas—Budget and Accounting, Payroll, and Personnel. Data basic to one area—once entered into automatic data processing equipment—will flow to all areas to which it applies. Business-type computer programs will capture data for analysis by mathematical programs. The ADP equipment is already available in the Department. So are the employees who can implement the system—employees experienced in automatic data processing.

The system will reduce the administrative support requirements by more than $1,500,000.

Payroll data will be processed in one office — not in 87. Data and reports will go quickly and directly to all levels of management. The information will be accurate and fresh.

The development and installation will be phased. Initial installation is planned to begin in one year; installation of the final phase is planned to be completed in three years. The costs of development and installation will be recovered before the end of the installation period.

Future

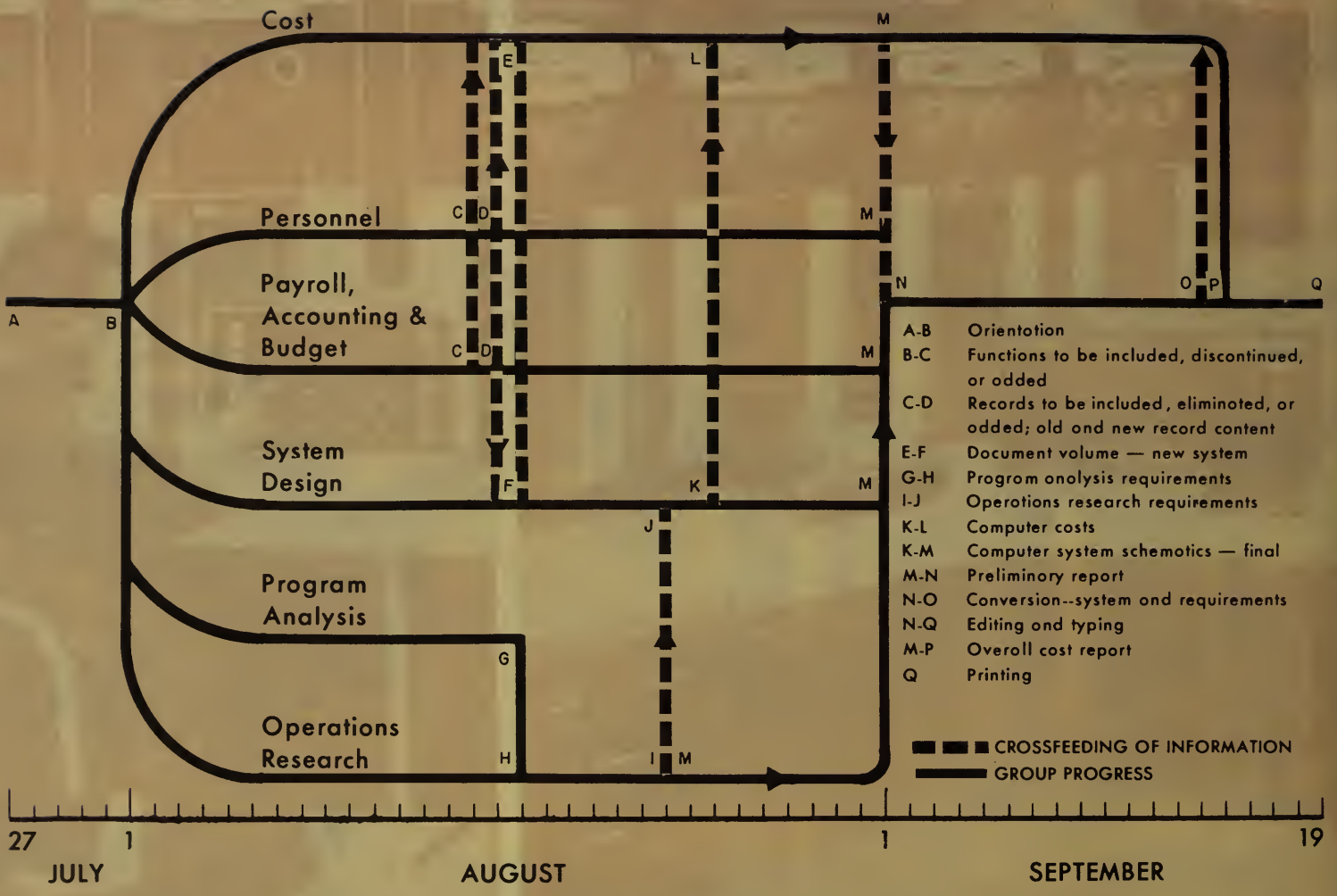
In the future, management decisions will be aided by mathematical applications in two areas — Human Relations and Management Effectiveness. Data from payroll and budget will flow into these areas. Mathematical techniques will provide new management tools — tools to help us use our employees and our dollars to accomplish objectives with greater effectiveness — tools to help us afford greater opportunities for the self-development of our greatest resource, the employees of the Department of Agriculture.

IND

- introduction
- problem
- system
- installation
- evaluation

E X

BATTLE PLAN FOR EFFICIENCY



INTRODUCTION

Administrative Assistant Secretary Joseph M. Robertson wanted to look at the effectiveness of the money and manpower spent in the Department. Some of our agencies have made material advances in automatic data processing. Could ADP be applied here?

July 31

Project leaders reported on discussions with agency representatives. From an integrated systems approach, payroll and accounting, personnel, and budget were areas in which the possible value was worth the cost of a feasibility study. The value would come in two ways—by reducing the cost of administrative support and by supplying new management tools. These tools—if obtained as a part of the total system, using data primarily available for other purposes—could answer two needs discovered in the discussions: A tool for manpower inventory management and a tool for determining the effectiveness with which objectives were accomplished. From this developed the mnemonic for the system — **MODE** — **M**anagement of **O**bjectives with **D**ollars through **E**mployees.

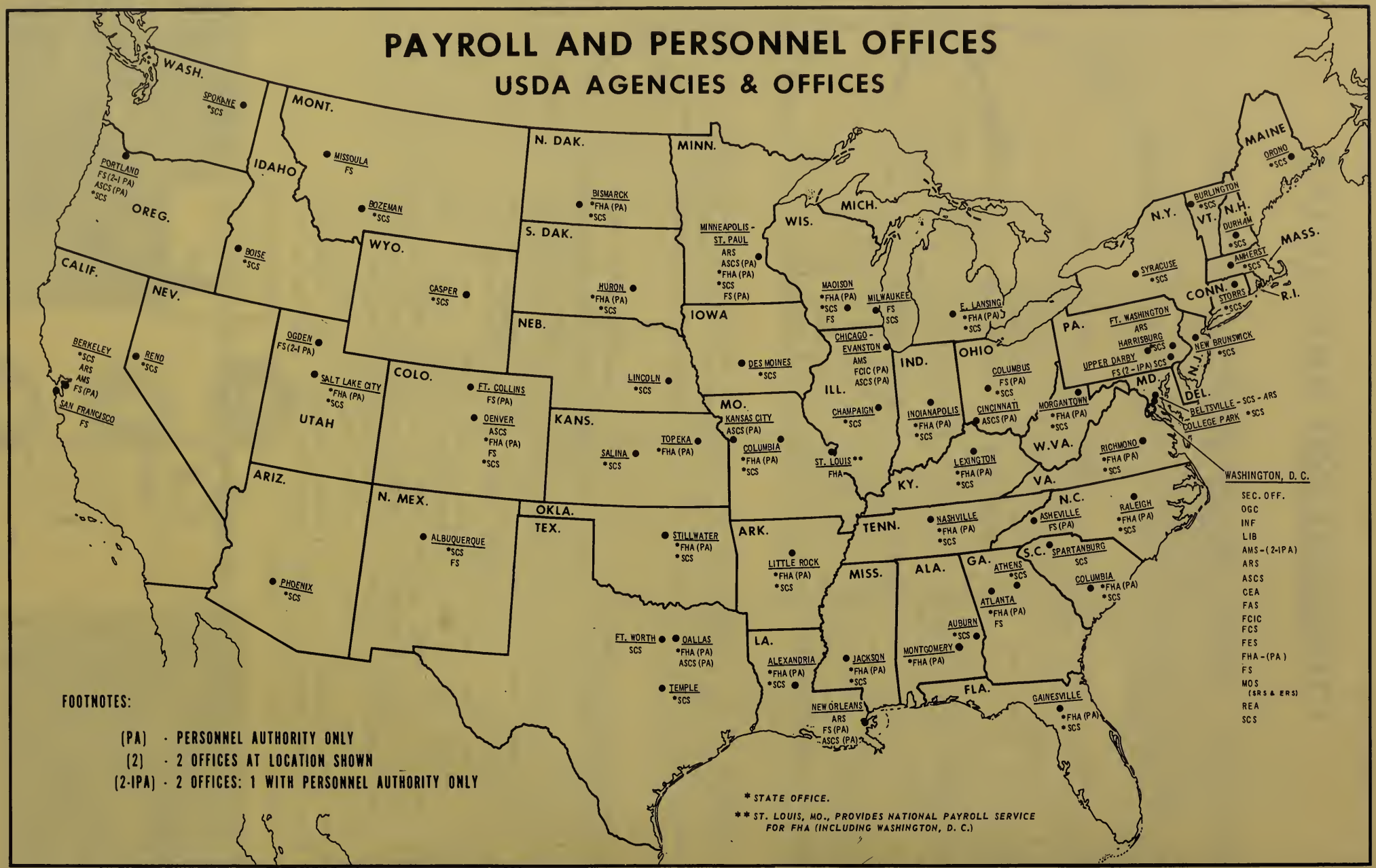
August 1

In response to the request of the Administrative Assistant Secretary, agencies and offices of the Department assigned 38 employees to the project. Six work groups were assembled—each with a leader.

Basically the Personnel work group and the Payroll, Accounting and Budget work group were to study the system requirements—what the system should use as data and what documents, statements and reports needed to be produced. The Operations Research work group sought to apply mathematical techniques to develop concepts of new tools for management. The System Design work group was to develop a computer system responsive to the needs. The Program Analysis work group was to contact each agency to determine existing ways in which management effectiveness in accomplishing objectives could be determined. The Cost group was to develop the before and after costs to determine the results of any system change. The objective was clear—the campaign was organized—the task force was assembled, briefed and ready.

August 10

Secretary Orville L. Freeman approved the recommendation to proceed with the study.


PAYROLL AND PERSONNEL OFFICES
USDA AGENCIES & OFFICES
WASH.
SPOKANE *SCS
PORTLAND FS (2-I PA) ASCS (PA) *SCS
OREG.
MONT.
MISSOULA FS
BOZEMAN *SCS
IDAHO
BOISE *SCS
N. DAK.
BISMARCK *FHA (PA) *SCS
MINN.
MINNEAPOLIS - ST. PAUL ARS ASCS (PA) *FHA (PA) *SCS FS (PA)
S. DAK.
HURON *FHA (PA) *SCS
WYO.
CASPER *SCS
CALIF.
BERKELEY *SCS ARS AMS FS (PA)
SAN FRANCISCO FS
NEV.
RENO *SCS
UTAH
OGDEN FS (2-I PA)
SALT LAKE CITY *FHA (PA) *SCS
COLO.
FT. COLLINS FS (PA)
DENVER ASCS *FHA (PA) FS *SCS
NEB.
LINCOLN *SCS
KANS.
SALINA *SCS
TOPEKA *FHA (PA)
IOWA
DES MOINES *SCS
MO.
KANSAS CITY ASCS (PA)
COLUMBIA *FHA (PA) *SCS
ARIZ.
PHOENIX *SCS
N. MEX.
ALBUQUERQUE *SCS FS
OKLA.
STILLWATER *FHA (PA) *SCS
TEX.
FT. WORTH SCS
DALLAS *FHA (PA) ASCS (PA)
TEMPLE *SCS
ARK.
LITTLE ROCK *FHA (PA) *SCS
LA.
ALEXANDRIA *FHA (PA) *SCS
NEW ORLEANS ARS FS (PA) ASCS (PA)
MISS.
JACKSON *FHA (PA) *SCS
ALA.
AUBURN *SCS
MONTGOMERY *FHA (PA)
GA.
ATHENS *SCS
ATLANTA *FHA (PA) FS
FLA.
GAINESVILLE *FHA (PA) *SCS
S.C.
SPARTANBURG SCS
COLUMBIA *FHA (PA) *SCS
N.C.
ASHEVILLE FS (PA)
RALEIGH *FHA (PA) *SCS
TENN.
NASHVILLE *FHA (PA) *SCS
KY.
LEXINGTON *FHA (PA) *SCS
ILL.
CHAMPAIGN *SCS
CHICAGO - EVANSTON AMS FCIC (PA) ASCS (PA)
ST. LOUIS ** FHA
MICH.
WIS.
MADISON *FHA (PA) *SCS FS
MILWAUKEE FS SCS
E. LANSING *FHA (PA) *SCS
IND.
INDIANAPOLIS *FHA (PA) *SCS
OHIO
COLUMBUS FS (PA) *SCS
CINCINNATI ASCS (PA)
W.VA.
MORGANTOWN *FHA (PA) *SCS
VA.
RICHMOND *FHA (PA) *SCS
PA.
FT. WASHINGTON ARS
HARRISBURG *SCS
UPPER DARBY FS (2 - IPA) SCS
N.Y.
SYRACUSE *SCS
MD.
BELTSVILLE - SCS - ARS
COLLEGE PARK *SCS
DEL.
N.J.
NEW BRUNSWICK *SCS
CONN.
STORRS *SCS
R.I.
MASS.
AMHERST *SCS
VT.
BURLINGTON *SCS
N.H.
DURHAM *SCS
MAINE
ORONO *SCS
WASHINGTON, D. C.
SEC. OFF.
OGC
INF
LIB
AMS - (2-IPA)
ARS
ASCS
CEA
FAS
FCIC
FCS
FES
FHA - (PA)
FS
MOS (SRS & ERS)
REA
SCS
FOOTNOTES:
(PA) - PERSONNEL AUTHORITY ONLY
(2) - 2 OFFICES AT LOCATION SHOWN
(2-IPA) - 2 OFFICES: 1 WITH PERSONNEL AUTHORITY ONLY
* STATE OFFICE.
** ST. LOUIS, MO., PROVIDES NATIONAL PAYROLL SERVICE FOR FHA (INCLUDING WASHINGTON, D. C.)

THE PROBLEM

Secretary Freeman has said:

> "In a literal sense, agriculture is everybody's business...its problems are everyone's problems... its strength is the nation's strength...its weakness is a danger to the total structures of the economy."

To accomplish Secretary Freeman's objectives effectively is a major administrative problem.

The capital investment in agriculture exceeds 200 billion dollars. Expenditures of the Department, as authorized by the Congress, totaled 5 9/10 billion dollars in 1961; 1/2 of a billion dollars of this was spent for salaries for more than 96,000 employees. With a program of this size, the vital problem is to attain maximum effectiveness in accomplishing objectives. Keys to accomplishing objectives are dollars and employees.

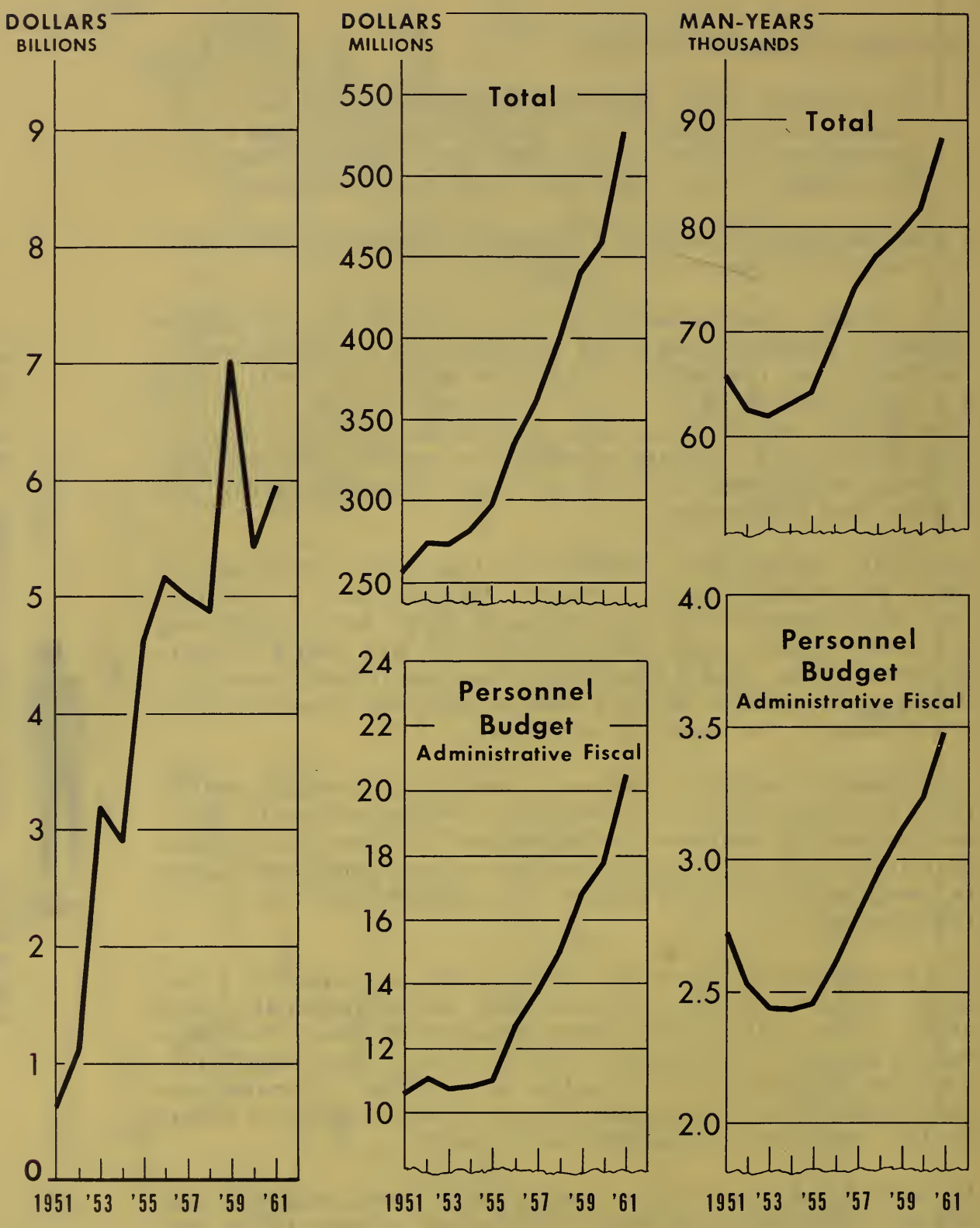
Activities within the Department that are barometers of these essential keys are Budget, Payroll, and Personnel. Data from barometers could provide tools for determining the effectiveness with which objectives are being accomplished. That was Administrative Assistant Secretary Robertson's plan in taking a look at applying automatic data processing to the common services.

Appointment authority is exercised and personnel operations are conducted in 130 offices in the Department. Payroll operations also are conducted in 87 of these 130 offices. Starting at 130 offices, information on personnel and budget is compiled in pyramid fashion through the agencies to the Department.

The management generally is restricted to a specific area. Some of the areas are national, some regional, some state, some office, and some—in metropolitan Washington—a group of employees. Within these areas, opportunities for employees to develop are limited, management effectiveness in accomplishing objectives is difficult to appraise, and costs of operations are high.

It costs $46 a year to serve each Department employee for payroll, clerical personnel and budget transactions, and related reporting operations. This represents less than 10% of the cost of administrative support and less than 1% of the total paid in salaries. But these transactions are the keys to the effectiveness obtained from the 1/2 billion dollars spent for salaries. To a large extent they are also keys to the effectiveness obtained from the more than 5 billions spent annually by the Department. For employees—

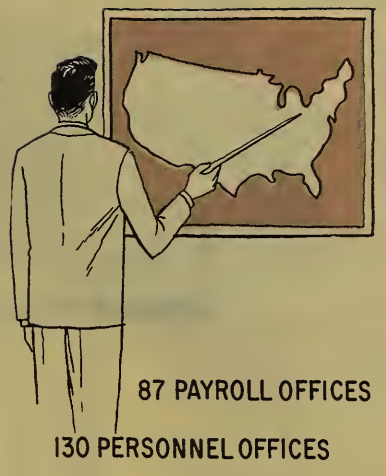
Trends in Costs



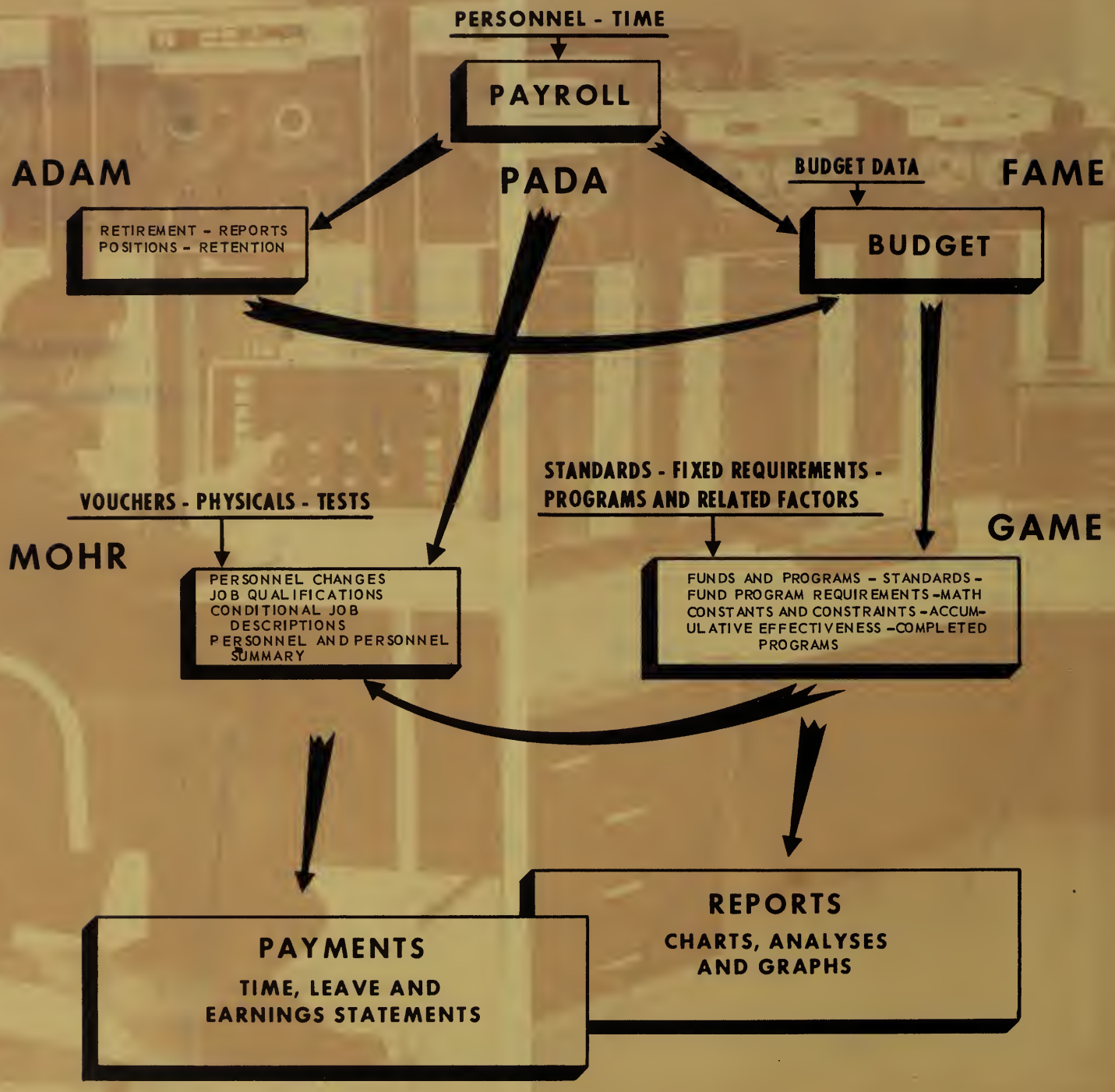
their development, their work, their accomplishments—are the Department. Data on these individuals—as dynamic, changing personalities and as workers—tell the effectiveness in accomplishing Secretary Freeman's objectives.

Costs—dollars and employees—have been rising in the Department since 1953. As shown on the chart, costs of the three key items have followed the total personal services costs—both in man-years and dollars. Why the cost per employee serviced did not go down as the number of employees went up is not apparent. In part the rise is due to increased complexities. Certainly, in part, it is due to using 130 offices.

The problem then is twofold: To lower the cost for servicing the Department's 96,000 employees—initially in the fields of payroll, personnel, and budget; and to capture—in accessible form—key data that will indicate how well the objectives of Secretary Freeman are being attained.



MODE


PERSONNEL - TIME
PAYROLL
ADAM
RETIREMENT - REPORTS
POSITIONS - RETENTION
PADA
BUDGET DATA
FAME
BUDGET
VOUCHERS - PHYSICALS - TESTS
MOHR
PERSONNEL CHANGES
JOB QUALIFICATIONS
CONDITIONAL JOB DESCRIPTIONS
PERSONNEL AND PERSONNEL SUMMARY
STANDARDS - FIXED REQUIREMENTS - PROGRAMS AND RELATED FACTORS
GAME
FUNDS AND PROGRAMS - STANDARDS - FUND PROGRAM REQUIREMENTS - MATH CONSTANTS AND CONSTRAINTS - ACCUMULATIVE EFFECTIVENESS - COMPLETED PROGRAMS
PAYMENTS
TIME, LEAVE AND EARNINGS STATEMENTS
REPORTS
CHARTS, ANALYSES AND GRAPHS

SYSTEM

This system is a way to provide more information—better tools—for the **M**anagement of the Department's **O**bjectives through **D**ollars provided by the Congress with **E**mployees of the Department. It is the first system designed for the Department as a whole. It has information at one source on all the money used, all the employees who work, all that the money and the employees accomplish—a picture of all of the accomplishments of the Department.

To conceive the system—to lay out the plan—took one month of self-appraisal using some of our most skilled technical and professional employees and guided by some of our most able administrators. But from this effort has come a system for management. The system not only pays employees, keeps their personnel records, watches our budget, even more important, it tells us how to manage our money and our employees to reach the objective of Secretary Freeman to help keep the Nation's agriculture strong.

EXACTLY WHAT IS THE SYSTEM? HOW WILL IT WORK?

Let us consider, first, the basics—how it pays employees, keeps records, watches our budget.

We will have one payroll office—instead of 87. It will be located in New Orleans, where the Department already owns a large computer, a 705 III. Time is available on the machine at the Data Processing Center (called the DPC); the only additional money we will have to spend is for employees to run it and for the manufacturer to maintain it.

FINE, BUT DOES THE COMPUTER KNOW THE SYSTEM? ISN'T IT SOMETHING NEW?

Yes, it is something new—very new. It is a total systems approach for the whole Department. But in New Orleans we have people who understand the computer, who know how to tell it what to do. To tell the computer something, they write it down. That is called programming. And what the computer is told to do—what is written down as the computer's instructions—is called the computer program.

WILL IT TAKE LONG TO TELL THE COMPUTER WHAT TO DO—TO WRITE THE PROGRAMS?

Yes—about a year.

WE'LL BE WAITING ALL THAT TIME?

Not really, the basic staff—a cadre—in our new office in New Orleans (called the MDSC, or Management Data Service Center) will be working with managers of the organizations within the Department in getting employee instructions

written, forms designed, plans made for using and operating this new system.

AFTER THE SYSTEM IS INSTALLED, HOW WILL IT WORK?

In general terms it works like this: the computer keeps records on magnetic tape—tape similar to that on your tape recorder at home. Once a record is on the tape, it can be used over and over again.

The computer instructions—what we have told the computer to do—are kept on tape, too. But they will be placed in the computer's memory each time they are to be used. The system requires many more instructions than the computer has memory space for. We will change the instructions for the different processes, or programs, that we want the computer to accomplish.

WHAT RECORDS WILL THE COMPUTER KEEP ON THESE TAPES?

Many different ones. In fact, 18 different records will be kept on master tapes—the tapes that will be used over and over again.

WON'T THE RECORDS HAVE TO BE CHANGED?

Yes, we will write a new master tape each time we run the computer. This is called updating the master tapes. The old records will be brought up-to-date—some records will be added, some will be dropped, some will be changed.

WHAT WILL BE IN THE RECORDS?

That depends on which of the 18 master tapes we are talking about.

Let's start with the payroll—and consider the general concept of the system. We'll explain each of the five parts of the system in detail—one at a time.

UNDER THOSE FOUR LETTER NAMES?

That's right. Each one of those—called a mnemonic—stands for a series of computer processes or programs.

The first one—PADA—stands for Payroll Automation for the Department of Agriculture.

IS THAT A COMPUTER PROGRAM?

No—actually there are five 705 III programs required to process the payroll. PADA is an easy way to refer to all of them.

HOW DOES THE PAYROLL OPERATION WORK?

When an employee is hired, a record is placed in PADA so

that we will know his salary. Then, to keep our statistics on personnel, we will tell ADAM that we have hired another employee. In ADAM we keep a record of the jobs—those filled and vacant—at each office. So, we record in ADAM the fact that we have put this employee in a certain job number. Then, because we want to start a retirement record for this new employee, we tell ADAM to set up his retirement record.

SOUNDS LIKE THIS ADAM WANTS TO KNOW A LOT. JUST WHAT IS ADAM?

ADAM is a name for Agriculture Department Automated Manpower. It refers to sixteen 705 III programs that prepare reports on personnel statistics, keep retirement records, and keep a record of each position in the Department. So ADAM does have to know a lot—just about everything that happens to an employee from the time a job is established and the employee is hired until he retires.

IS THAT WHAT IS CALLED AN INTEGRATED SYSTEM—THE FLOWING OF RECORDS FROM ONE PART OF THE SYSTEM TO ANOTHER?

That's exactly right. In an integrated system like this one, records or data flow freely from one series of programs or application areas, to another. The flow of data from PADA to ADAM is an example. In the chart, the data flow is indicated by the arrows such as those from PADA to ADAM.

BUT, HOW DOES THE EMPLOYEE GET PAID?

First, of course, he has to work. The computer will produce a form for his timekeeper to use in reporting when he works and when he doesn't.

When this report, the time and attendance report, is entered into the computer, the employee's pay check is prepared—but it is on magnetic tape.

The tape goes to the Treasury Department. There, a computer and special mailing equipment will print the check and send it wherever the employee has said he wants it sent.

The cost is reported to the office for whom the employee works.

Data about the money paid to the employee and the money deducted for his fringe benefits is sent to FAME.

AND, JUST WHAT IS FAME?

That is the name for the three computer programs in the application area called Financial Analysis of Management Effectiveness. This area will compare the planned use of money and employees with the actual use.

HOW IS THAT DONE?

Money is provided by the Congress for specific purposes based on what the Secretary says it will cost to accomplish his objectives. The money may be more or less than requested. It is divided into parts and then into smaller parts called allotments or subaccounts. For each allotment or subaccount a plan is prepared, by month, of the money and employees to be used.

HOW DO YOU COMPARE WHAT REALLY HAPPENS TO WHAT IS PLANNED TO HAPPEN?

In some cases, the time and attendance report will show to what allotment or subaccount the employee's work applies. In other cases, the employee's office will divide the cost of all of its employees and report it.

WHAT WILL FAME BE USED FOR?

It is a management tool. The action that the Secretary and his managers will take is a matter of judgment.

WHAT WILL FAME TELL THEM?

Each pay period, every two weeks, the computer will report allotments and subaccounts for which money and employees are being used at a higher rate than planned—and, conversely, those for which the rate of use is lower than planned.

If the pay of employees is adjusted by the Congress, FAME will provide by allotment and subaccount the effect of the adjustment—in dollars and man-years.

SO FAR, THE SYSTEM SOUNDS LIKE WHAT WE ARE DOING NOW—ONLY TIED TOGETHER.

That's right, basically the payroll, personnel statistics, and budget work explained so far in this system is an integration of work now being done. Of course, how we will do it has been redesigned to take full advantage of the computer to do the work more cheaply and faster.

WHAT ARE THE NEW TOOLS FOR MANAGEMENT THAT WERE MENTIONED?

We're just coming to them. There are two major advantages in using a computer. The first is the system redesign and use of the computer to process data. Although it's the same management information we produce now, it will be processed in a different way and perhaps in a different form. The second advantage is that mathematical programming can be applied to use the data captured in the system to produce new and valuable tools for more scientific management.

FOR THE MANAGEMENT OF WHAT?

First, for the Management Of Human Resources. The 7070 computer programs for this application area are referred to as MOHR.

WHAT IS THE 7070 COMPUTER? HAVEN'T WE BEEN TALKING ABOUT THE 705 III IN NEW ORLEANS?

Yes, we have—up to now. The business programs for payroll, personnel, and budget will be processed by the 705 III. But, for the mathematical programs, we need a business and scientific computer such as the 7070.

DO WE HAVE ONE OF THESE IN THE DEPARTMENT?

We have the use of one. It is owned by an insurance company in Dallas. The Department shares it by leasing a fixed number of hours per month on an annual basis.

DO WE KNOW HOW TO USE IT?

We have had programs in production on it—both business and mathematical—for 6 months.

WHAT ABOUT PEOPLE TO WRITE THE PROGRAMS?

A staff of Department employees at Dallas includes a group of applied mathematicians engaged in operations research studies, applications, and operations.

WHAT WILL THESE PROGRAMS PROVIDE?

The computer will make it practical to survey all of the scientific, professional, technical, and administrative talent in the Department to fill specific job needs. Also, it will provide guidelines and trends on future recruitment needs.

WHAT ABOUT THE INDIVIDUAL EMPLOYEE—WHAT DOES IT MEAN FOR HIM?

It means full consideration, based on merit, for any position in the Department for which he is qualified.

It means better training. Employee needs, based on supervisor appraisal, can be categorized and training concentrated on specific needs. Training results can be related to costs to provide guides for increasing the effectiveness of the training in employee development.

WHAT WE HAVE DISCUSSED SO FAR HAS TO DO WITH EMPLOYEES AND WITH COMPARING PLANNED USE WITH ACTUAL USE OF DOLLARS. WHAT IS THE NEW TOOL FOR MEASURING RESULTS—FOR MEASURING THE EFFECTIVENESS IN ACCOMPLISHING THE SECRETARY'S OBJECTIVES?

It is called GAME. It will fill the area of greatest need, the need for a scientific management tool to measure effectiveness.

FOR EXAMPLE?

We will get from FAME data on the use of money and employees by allotment and subaccount. To this we will add what is accomplished.

THAT SOUNDS LIKE A WORK-MEASUREMENT SYSTEM.

In the beginning, it will be. But it has to become more than that. We need a measure of the effectiveness of the accomplishment of the Secretary's objectives.

WHAT DOES THAT MEAN?

We want to identify indicators of the success of a program that has been established to accomplish the objective. This has to be done in steps:

> Determine what it is that indicates success, or the accomplishment of the objectives.
>
> Determine how to capture readings—count or measures—for the indicators.
>
> Relate money and employee use to that reading.
>
> Determine the relationship of the variation in the use of money and employees to the variation in the readings.

IN A PRACTICAL APPLICATION, WHAT DOES THAT MEAN?

Let's relate those steps to a hypothetical case: Assume that the objective is to get a proposal accepted in a wide area; Assume further that we have been working at this for a period of time and have kept statistics on what we had been putting out—statistics on dollars and employees' time for the return by type of contact. Finally assume that the value of the accomplishment of larger acceptance, though desirable, was not enough to justify a greater use of money and employees.

Following our steps, then, we would:

> Assume that the measure of success was the number of acres of a certain type of land for which the acceptance was applied.
>
> Then we would establish by type of contact the use of money and employees per unit of land to which the acceptance was applied.

We would test the results of variation of the use of money and employees to the effort, to establish the variance of success to the cost of the effort.

Then we have a basis for anticipating the effect of the alternatives of widening our area of activity, with less cost applied to each area, or of decreasing our area and increasing our cost per area.

HOW COULD THE INFORMATION THEN BE USED?

With this information, and similar information on other programs, the relative results of variations in the money and employees used or to be used will be determined.

ASIDE FROM USING IT TO INCREASE THE EFFECTIVENESS OF SPECIFIC OBJECTIVES, HOW WILL IT BE USED?

It will be used in budget preparation.

JUST HOW?

In two ways: First, it can be used to compute the money and employees that would be required to accomplish the recommended degree of effectiveness. Second, the Secretary can use it to get an idea of the results in effectiveness of his objectives by varying the money and employees applied to each objective.

THEN, THIS IN ITSELF DOES NOT COMPUTE THE BUDGET.

No, it is only a management tool. Certainly many other considerations will also enter into the preparation of the budget.

WHAT WILL HAPPEN, AFTER GAME IS IN OPERATION?

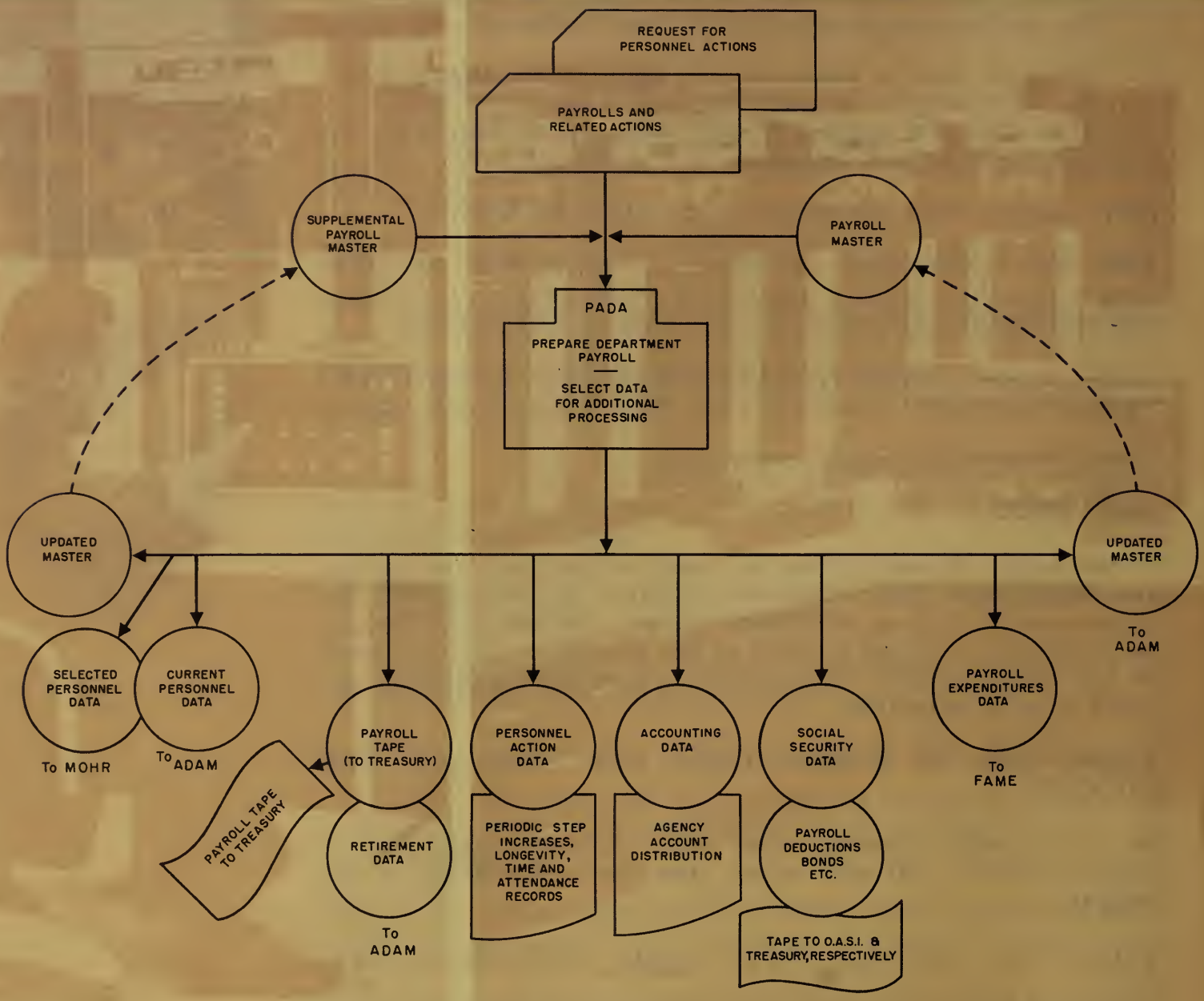
The management effectiveness anticipated—based on money provided by the Congress—will be projected and retained on a master tape by the computer.

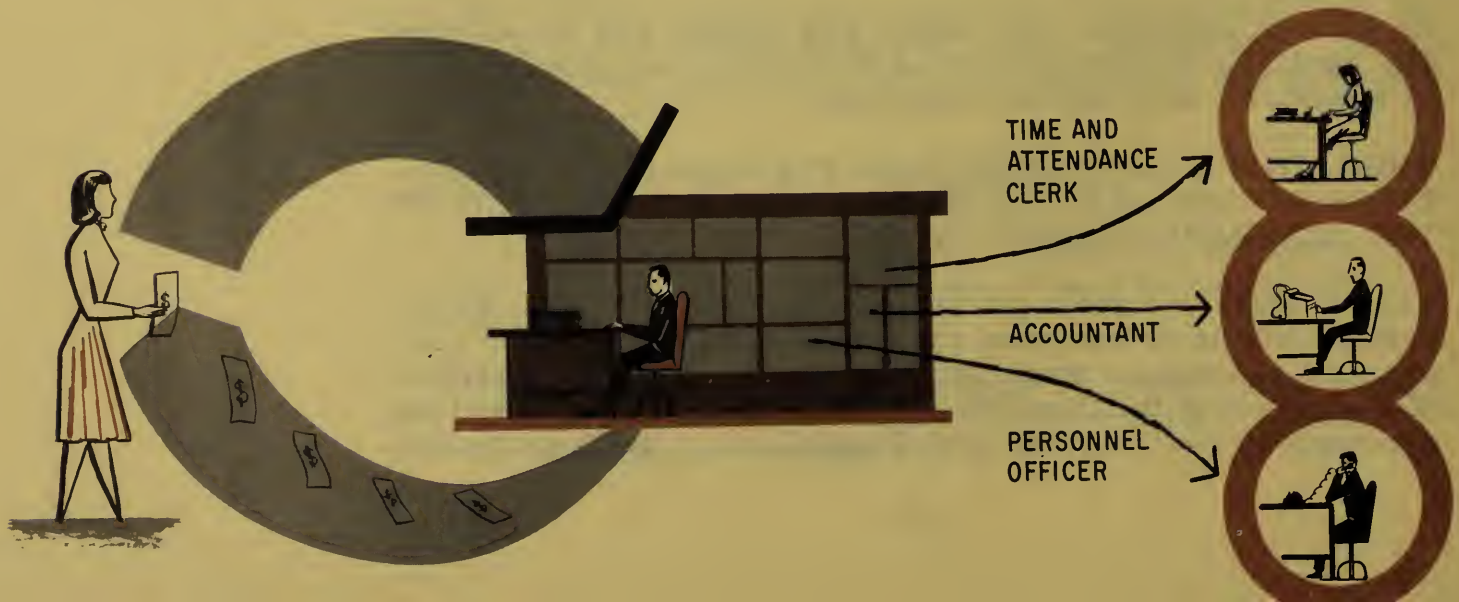
As accomplishments are made and money and employees are applied, the management effectiveness anticipated will be compared with that accomplished.

THEN, THIS IS AN INTEGRATED SYSTEM—FROM OBJECTIVES TO DOLLARS TO EMPLOYEES TO ANALYSIS OF THE ACCOMPLISHMENT OF THE OBJECTIVES.

Yes, it truly is a total system—integrated both as to applications and as to business and mathematical computer programs—a system that provides a means of effective **M**anagement of the Department's **O**bjectives through **D**ollars provided by the Congress with **E**mployees of the Department.

PAYROLL AUTOMATION FOR DEPARTMENT OF AGRICULTURE





Payroll Automation for Department of Agriculture —PADA—

The payroll application area will compute the pay of more than 96,000 Department employees and will compute payroll costs for the Department as a whole. It will also provide a base record to supply financial and statistical information for the other application areas.

Initially, information on existing payroll and personnel records will be entered for each employee—position, rate of pay, amount of deductions for bonds, life insurance, health benefit plans, Federal and State taxes, Civil Service retirement, social security, and so forth.

Additional information on changes in pay or deductions and on amount of time worked will be fed into the computer weekly and biweekly. The computer will then produce a magnetic tape that will be sent to the Treasury Department so that pay checks and bonds can be issued. A check may be delivered to an employee's home, his office, or deposited at his bank—the computer tape will indicate where it should be sent. The computer will also produce a tape that will contain Federal Insurance Contributions Act (FICA) information.

The payroll computation is complicated by many variations. The time of payment varies—most employees are paid biweekly, but others are paid weekly, semimonthly, monthly, and some periodically as they ask for their pay. The rate on which pay is based varies—annual, daily, hourly, and commission rates. Deductions vary. In addition to the normal ones, such as for bonds, insurance, retirement, etc., there may be allowances for quarters and horses, deductions for meals, and offsets for debts due the Government.

Leave also varies. Some employees earn leave; others don't. And more than 7 kinds of leave can be used—annual, sick, compensatory time, leave without pay, and so forth. Leave can affect an employee's amount of pay, his increase in rates of pay, and his retirement. It is a major consideration in computing the payroll.

Records of time worked and leave taken will come to the MDSC, through contact points, from more than 8,500 time and attendance clerks. (The records will be on cards previously prepared by the computer for each employee.) The reports will be reviewed in the MDSC and the data from them entered into the system at the DPC.

With the time and attendance reports will come changes in bond authorizations, tax exemptions, check dispositions,

and insurance options. This data will be entered into the system along with the time and attendance data.

Other information will come weekly from more than 130 personnel offices and 2,000 appointing locations—notifications of accessions; requests to effect name changes, separations and employee changes in positions; notifications of position establishment, abolishment, and reclassification; position descriptions; and reports of positions audited.

When the computer receives this data, it will classify the information according to the needs of the application areas. Data on classification of positions and retirement, which is not applicable to payroll, will be written on tape for entry to the personnel area.

As the payroll is being processed, the computer will watch each employee's record. It will compute some actions as they occur and record—or store—the results of its action. For other actions it will generate action data that it determines is needed in other areas of the system—personnel, budget, and human resources. For still other actions, it will print out reports or tapes.

Here are some examples of how the computer programs will work:

Records on the master payroll tape will be in social security number order. If an employee does not have a social security number, the computer will assign a temporary number.

As the master payroll tape is processed, all input data for an employee will be available to the computer. Changes in name, bond, taxes, insurance, pay, allowances, and disposition of checks will be made as they occur. Overtime and leave without pay will be computed from the entry of the number of hours. The computer will consider any adjustments in rate of pay, overtime, allowances, and leave without pay and compute one payment for the net amount due each employee.

The computer will check any amount withheld for bonds. When the amount is sufficient, a tape will be prepared and sent to the Treasury disbursing office where it will be used to print the savings bond.

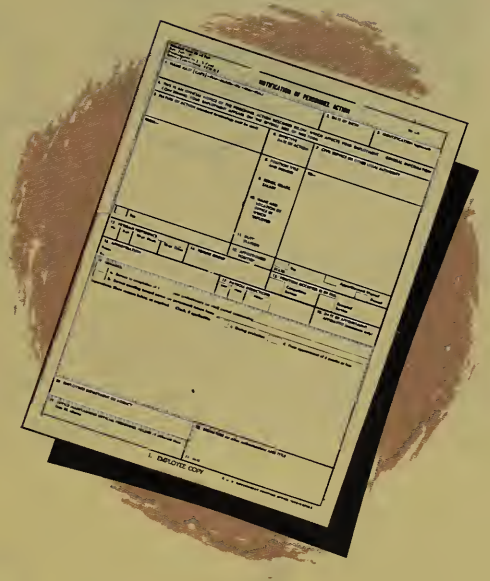
If an employee has been in a grade long enough to receive a periodic increase within his grade, a notice will be given to his personnel office 2 months before the effective date. Unless the MDSC is notified, not to do so, the increase will

be generated within the computer; the employee's pay will be increased; and a notice sent to his personnel office. The employee will be notified of the increase on an earnings statement prepared by the computer.

When an employee's leave earning rate should be changed, the computer will generate the new rate and enter it on the employee's record. This will be printed on the time and attendance report that is to be used for the first period in which the new rate is effective.

If data is not received for an employee—that he worked or didn't—his record will be written on the Supplemental Payroll Master Tape. Names and records of these employees will be printed in two groups—those whose retirement or annual leave account is sufficient to cover the pay check and those whose account is not. Information will be supplied as to whether or not the employee was paid last pay day. If the MDSC decides to pay the employee, he will receive his check at the normal time. For employees to be paid only after their time and attendance report is received, supplemental payrolls will be prepared.

If an employee is promoted, his personnel office will send a Request for Personnel Action to the MDSC. The employee's record on the Payroll Master Tape will then be adjusted; the pay check will be produced on the basis of the new rate of pay; and a notification of Personnel Action will be prepared for the personnel office and the employee.

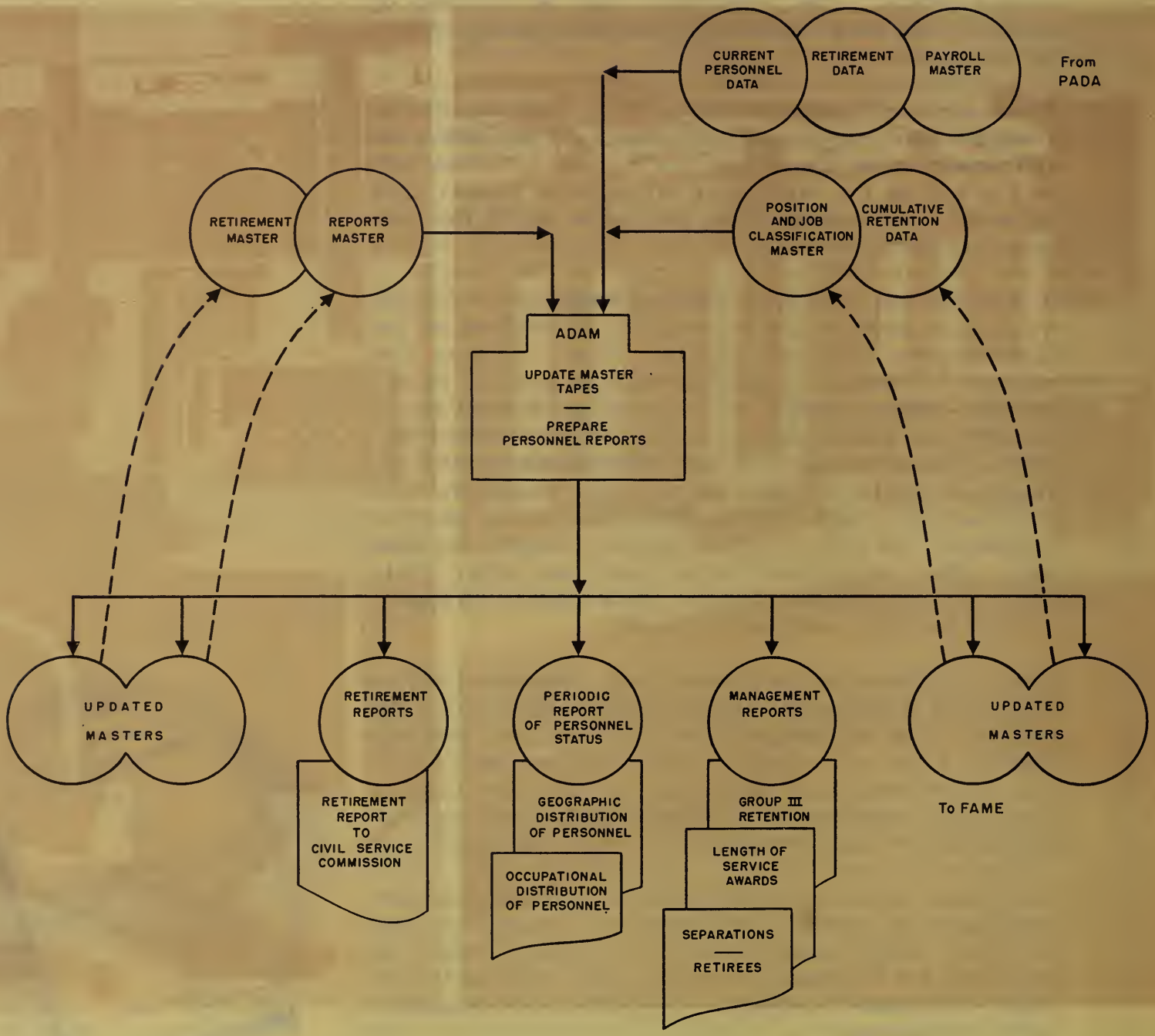


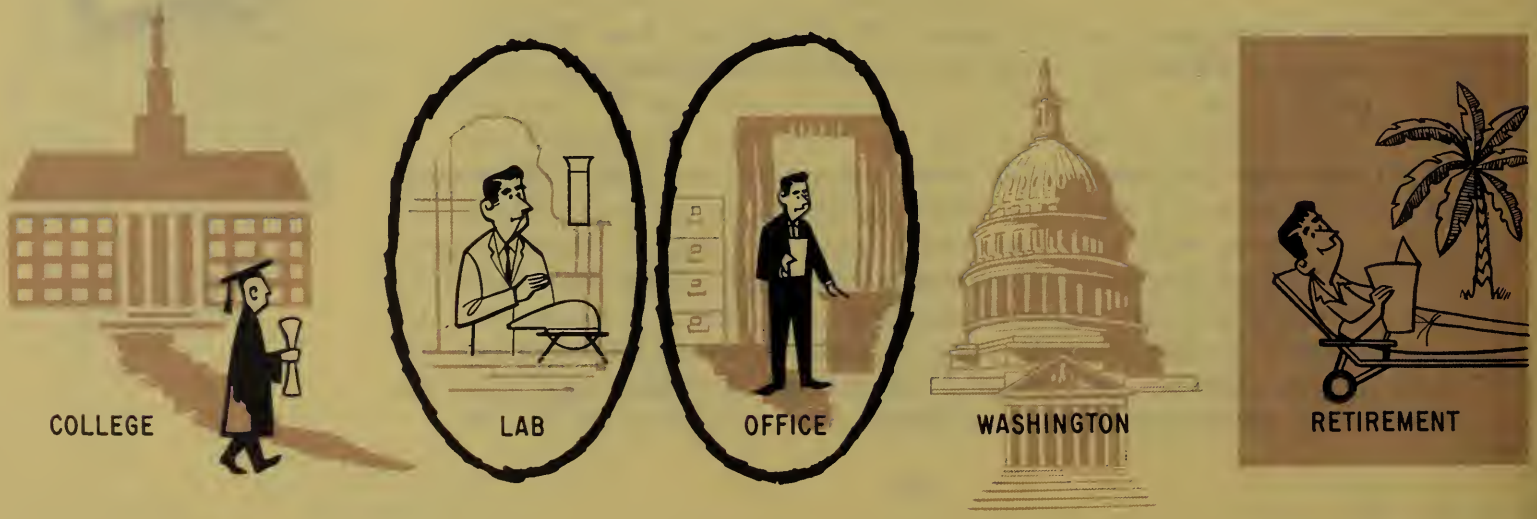
Inquiries can be entered to obtain special information about a specific employee or groups of employees. Only authorized requests will be processed. Personnel offices can use this technique to obtain computer-generated reduction-in-force registers.

The computer will produce Withholding Tax Statements, (W-2's), and wage, and withholding reports.

While doing its main and very complicated job of figuring the Department's payroll, this application area of the computer system will also generate data for three other areas. It will supply data on retirement and personnel statistics to the personnel area. It will supply data on expenditures to the budget area. It will supply data on work history information to the human resources area. It is a key area in the integrated computer system.

AGRICULTURE DEPARTMENT AUTOMATED MANPOWER

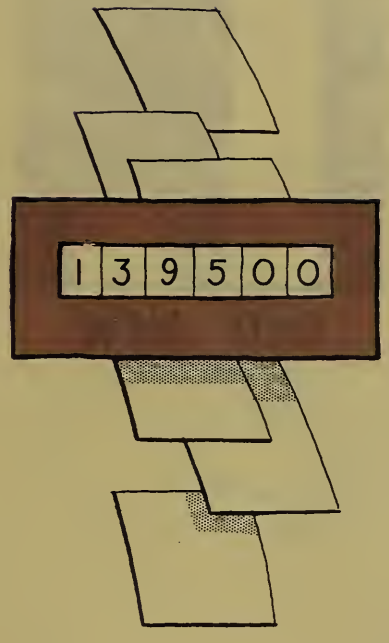




Agriculture Department Automated Manpower —ADAM—

This application area is a personnel reporting system. It will keep records on all classified positions and on retirement. It will also compute statistics from which a number of required personnel reports will be prepared.

All data for this area will come from the payroll application area. As the payroll is processed, information on classified positions and retirement will be selected or generated by the computer and sent to the personnel application area. This data will be used to update retirement records of more than 74,000 employees (those who are under Federal Civil Service retirement and are paid from the Treasury disbursing office) and to update the record of positions for more than 80,000 classified employees. The data will also be used to prepare various personnel reports. The computer in the payroll area will watch 150,000 personnel actions to select the data needed for ADAM.



The personnel application area will prepare individual retirement records for the more than 6,000 employees who retire or are separated from the Department each year. It will also produce current position charts for each of the 130 personnel offices.

Here are some examples of what the computer processes will do:

When a position is established, a record of it will be put in job number sequence on the position and classification master tape. The position number will include an organization code. When a specified number of changes have been made in positions, or occupants of positions, for an organization, the computer will prepare a new position chart.

If a request for personnel action is processed to promote an employee, the computer will determine that the proposed position is vacant. If it is, the employee will be shown as the occupant. If it is not, the action will not be accomplished.

If an employee retires, the request for personnel action will enter the payroll application area. Then data will be sent to the personnel application to vacate the position. As the last pay check is issued, the payroll application will generate data that will activate the retirement master tape in the personnel area. From this tape, the employee's individual retirement record will be produced.

At the end of each year, the computer will generate, as the payroll is being prepared, the total retirement deductions for each employee under retirement. This data will update the retirement master tape.

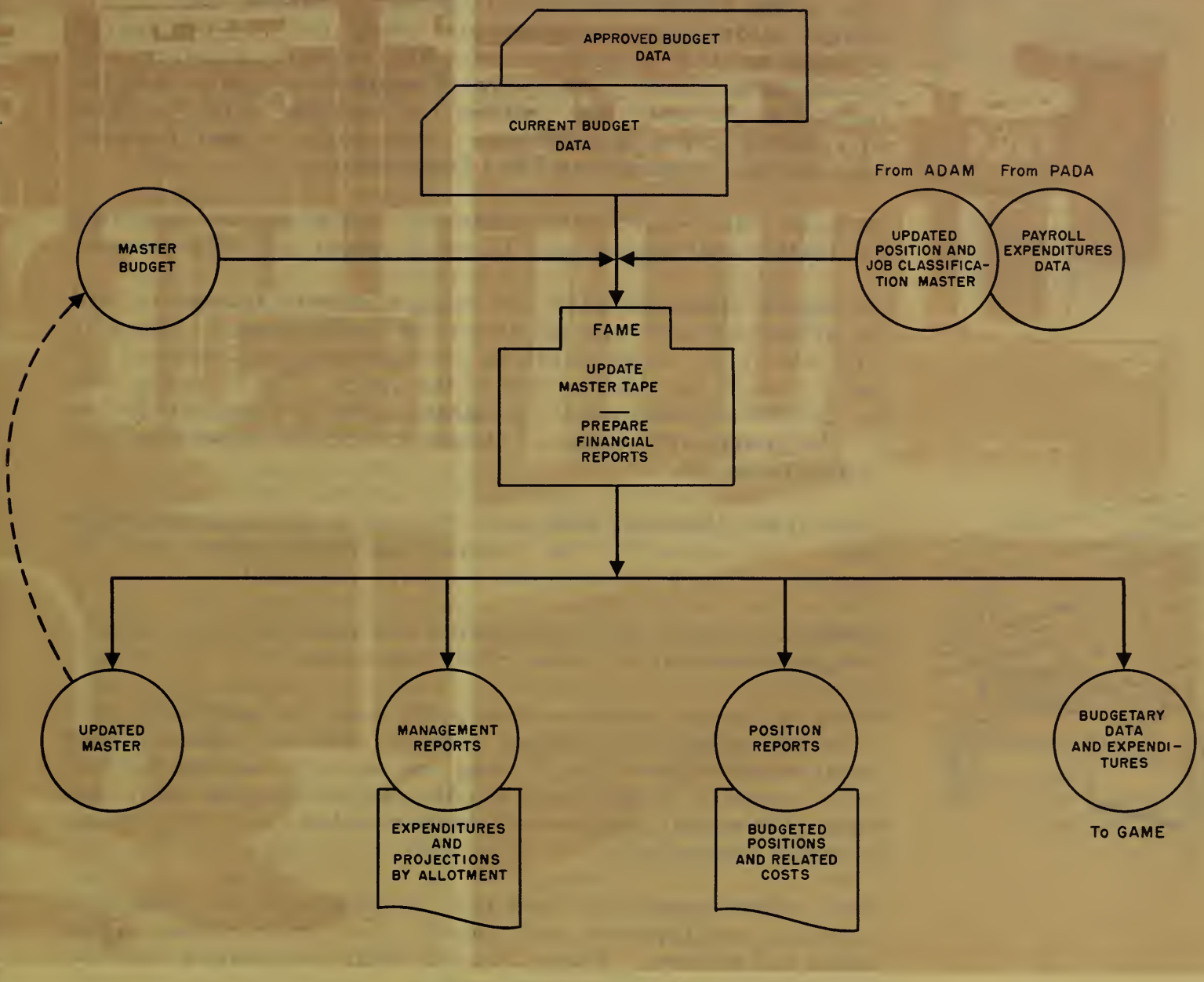
If an employee receives a temporary appointment pending establishment of a register, his record will be placed on the payroll master tape in the payroll application area. The payroll area will generate data that will be used in the personnel application area to establish the record on the position and job classification master tape and to report to the Civil Service Commission that a Retention Group III employee is occupying the position.

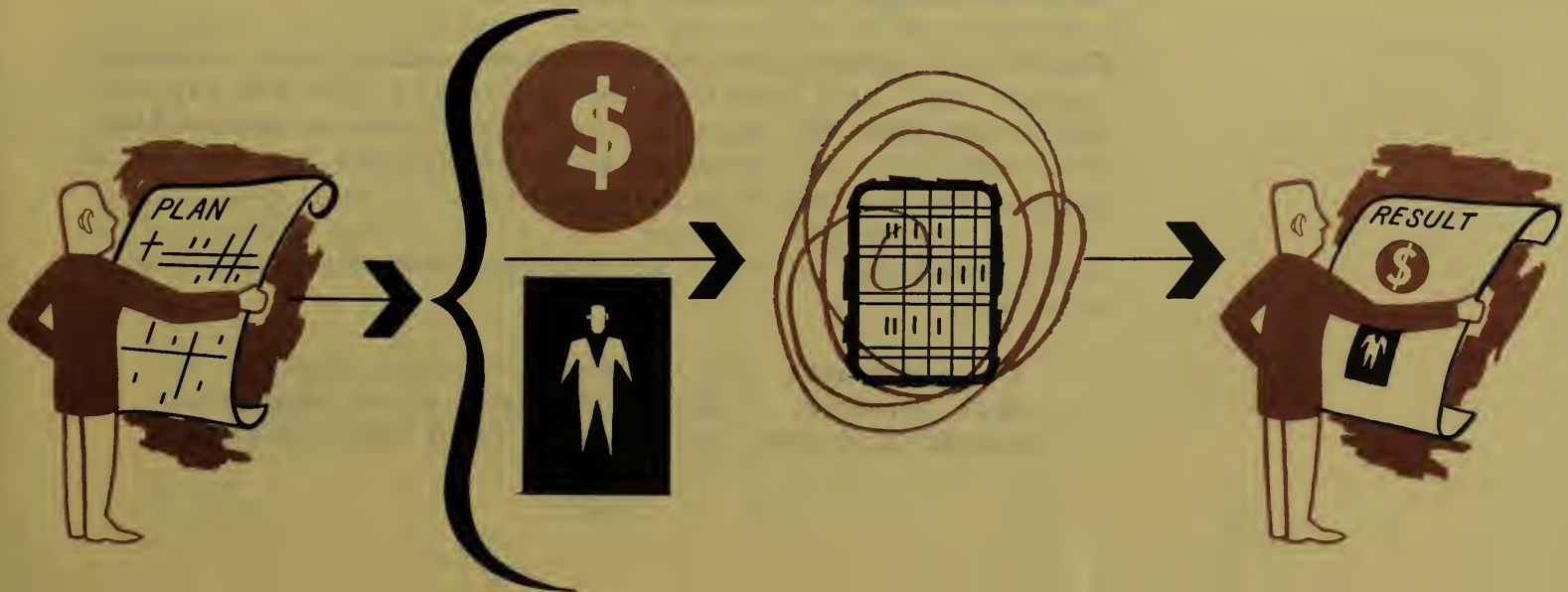
As the payroll is processed, data is extracted and generated for use in preparing personnel reports. This data is accumulated on the reports master tape.

It is estimated that 90% of the regular reports, 70% of the regular internal reports, and 50% of the special reports will be prepared by the computer.

ADAM will know everything that happens to an employee—from the time his position is established and occupied to the time he retires. It will serve the employee, by keeping records on his job and his retirement, and it will serve management, by supplying reports on personnel.

FINANCIAL ANALYSIS OF MANAGEMENT EFFECTIVENESS



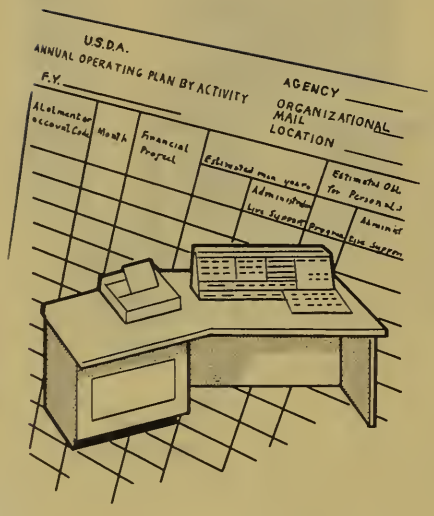


Financial Analysis of Management Effectiveness
—FAME—

This area of the system will gather, analyze, and report budget information. A plan for using the money appropriated by the Congress, monthly reports showing how money is actually used, payroll expenditure data, and information on positions will be fed into the system. With this information, the computer can analyze and prepare reports on the finances of the Department.

At first, the budget data gathered, analyzed, and reported by FAME will apply only to employment and salary costs.

An annual operating plan for using appropriated money will be prepared for each allotment or subaccount. The plan will show, by budget activity, the planned employment and salary costs for each month of the year. These costs will be divided between direct program activities and categories of administrative support activities, such as accounting and supervision.



Data from the plan will be recorded on the master budget tape. Revisions to the annual operating plan will be handled in the same way, as they are received.

Information on actual employment and salary costs—current budget data—will be gathered in two ways.

Some time and attendance reports used for payrolling will show the allotment, budget activity, and the type of work performed—either direct program activity or administrative support. When they do, the actual employment and salary cost information will be generated while the payroll is being computed.

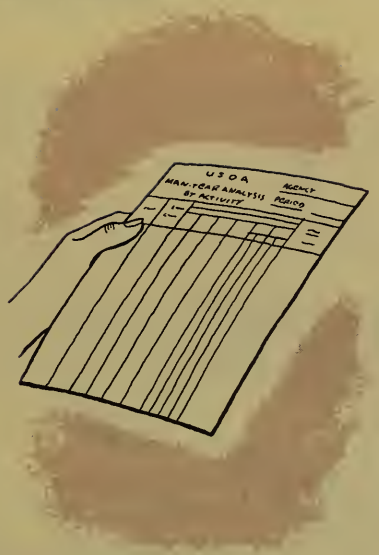
For other employees monthly reports will be submitted showing employment and salary cost information in the same breakdown. These reports will be entered initially into this budget application area.

From this information the computer will update the budget master tape and generate the budgetary data and expenditures tape for the management effectiveness area GAME. The computer will also prepare statistical and analytical reports for all levels of management.

Some examples of the computer processes in this budget area are:

> The computer will generate monthly reports for each allottee. The reports will show total man-months and total salary costs used for each budget

activity and compare the man-months and dollars actually used to the amounts planned. If the amount used varies significantly from the amount planned, the computer will generate a special notice to call the variation to management's attention.



The computer will also generate monthly reports for each allottee, by budget activity, showing a breakdown of man-years and salary costs between direct program functions and the six categories of administrative support functions, and the relative percentages devoted to each function. If total administrative support costs appear excessive in relation to direct program costs, or if one category of administrative support costs is unusually high, the computer will generate exception reports to notify management of the situation.

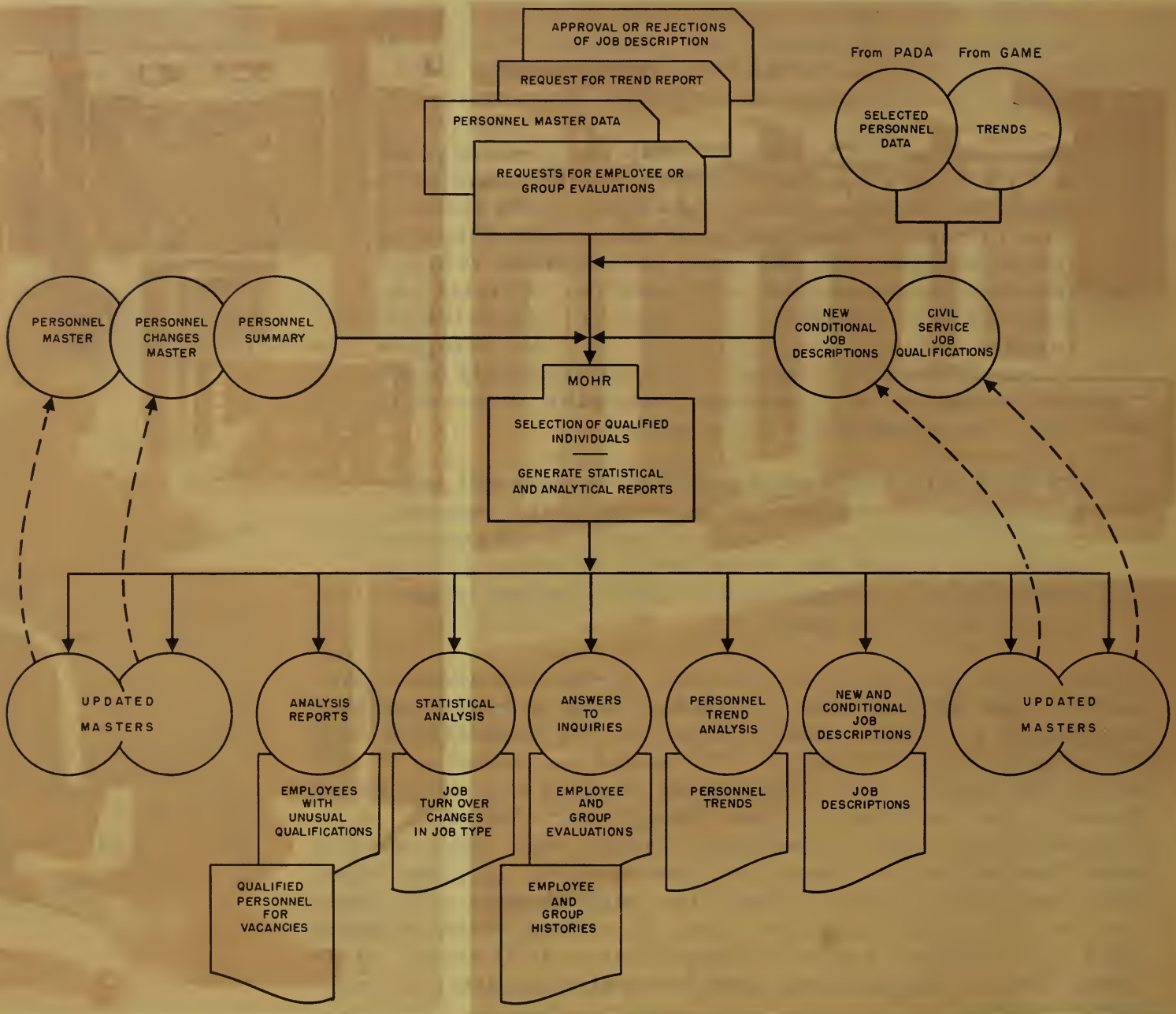
Periodically and annually the computer will compile Departmentwide reports showing the relationship of administrative support costs to direct program costs and the relationship between planned and actual employment and salary costs to projected trends for each.

From tapes prepared in two other application areas—personnel and payroll—the computer will prepare various statistical schedules and summaries for submission with the annual budget estimates. From the personnel area will come the position and job master tape—a record of every position, by location, in the Department. It will be a record of the type of position, salary rate, time vacant, time the incumbent spent on leave without pay, and other data for each position. From the payroll area will come the payroll expenditure data tape. It will show the amounts paid for various types of employment (full-time, part-time, etc.), regular pay, and several categories of premium pay.

With these two tapes (no other input will be necessary) the computer will generate information for the statistical schedules and summaries needed to accompany the budget.

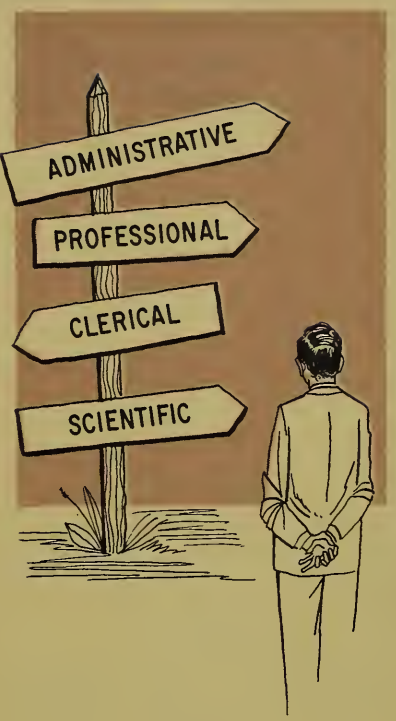
As experience and necessity dictates, the system will be expanded and modified to include other costs. Potentially, it can keep track of all the expenses of the Department and will furnish information for another application area—management effectiveness.

MANAGEMENT OF HUMAN RESOURCES



Management Of Human Resources
—MOHR—

MOHR is a system for better management of personnel—a system for developing and using the best abilities of each Department employee.



The system will maintain information on more than 34,000 employees—the scientific, professional, technical, executive, and administrative manpower of the Department. Employees will be evaluated in four ways: Self evaluation—that is, their personal preferences on career objectives and goals; physical evaluations—results of medical examination; analytical evaluations—results of tests; and performance evaluation—from performance ratings and appraisals by supervisors.

Information on job description and Civil Service Commission job qualifications will also be entered into the system.

One mathematical program, or model, will use job descriptions and qualifications, along with employee qualifications, characteristics, performances, and ratings, to develop rating constants. These constants will in turn be used in another model to relate the employee's characteristics to the rating constants. Because each employee is not a static being—because he develops and matures in his career, his abilities grow, his personality changes—the computer program will consider that each individual is changing in personality and capacity and will respond to the changes. With each change, the employee's potential will be reevaluated.

Requests for the computer to select personnel for consideration for special assignments, training, and promotion will be processed by another model. With this model, requests can be made without using an elaborate coding structure; words will be punched into cards and entered to the computer. Through the use of Boolean algebra, the model will construct the logic required to locate the potential employees for satisfying the request.

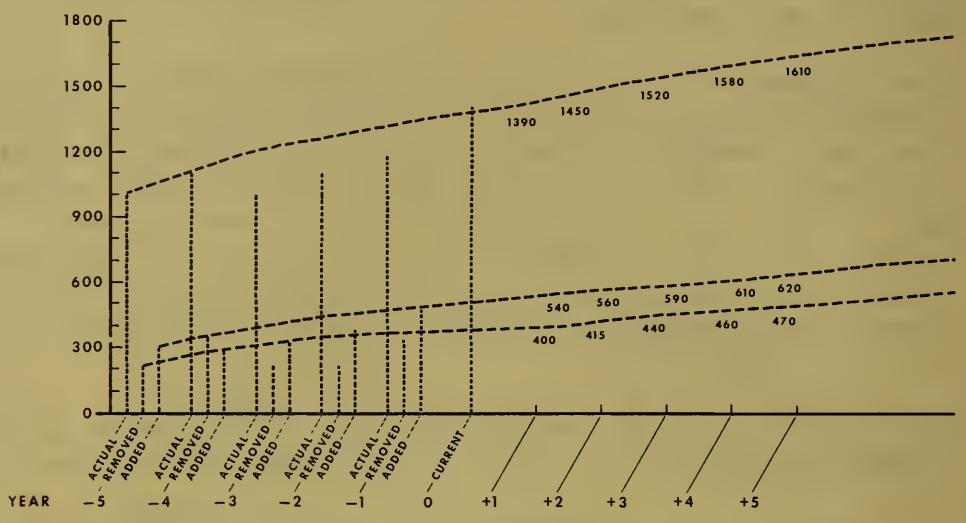
A fourth mathematical model will go one step further. From among the employees who could fill the request, it will pick the best ones. To do so, it will use job performance standards, evaluations, and detailed records of the employees who are qualified. The number of employees to be listed will be specified in the request. Final selection will be made by authorized personnel.

Some illustrations of what will be done in this application area are:

Needs of the Department for employees in specified occupations can be projected several years in advance.

Projected number of employees in selected job classes:
total
separations
replacements

GRAPHIC PRESENTATION OF STATISTICAL GROUPING



The computer will generate a report showing employees of unusual merit who are capable of doing much higher level work.

Employees who need training in specified areas will be identified.

Results from training can be identified and evaluated.

Major changes in an employee's health will be reported and related to the employee's position.

Employee turnover will be related to type—retirement, changes in type of job, and supervisor performance.

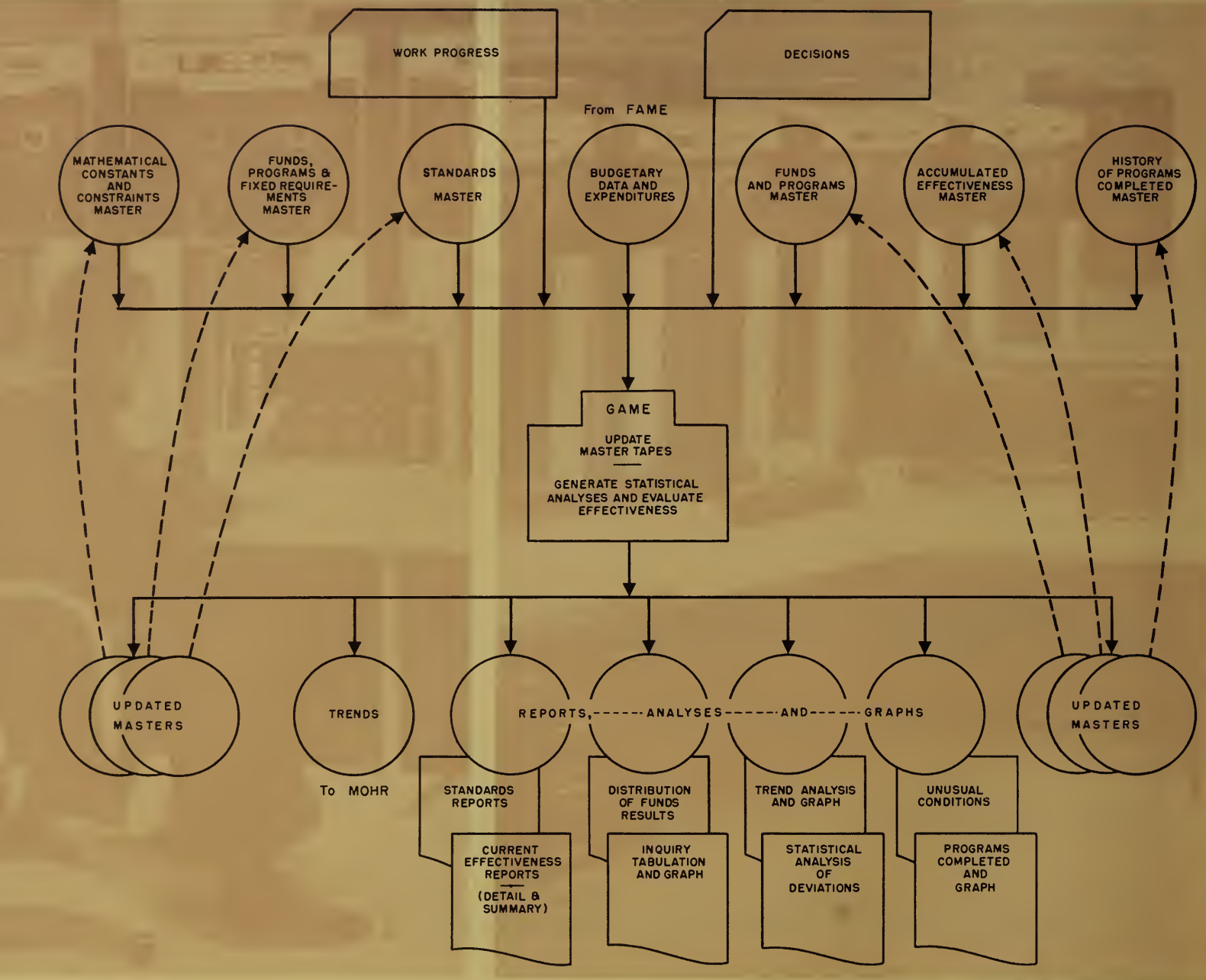
Employees can be considered for positions on a geographic basis, rather than only within an organization in the Department at a geographic location.

All qualified employees will be considered in meeting the manpower needs of the Department.

Characteristics of supervisors and employees can be considered in placing employees.

Because the Department is a service organization, its major resource is its employees. In fact, the Department is its employees. One way to accomplish the Department's objectives most effectively is to develop and use the maximum potential of each employee—or to encourage his self-development. That is the aim of MOHR.

GAMING ANALYSIS OF MANAGEMENT EFFECTIVENESS

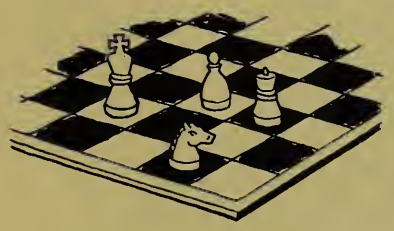


Gaming Analysis of Management Effectiveness
—GAME—

This area represents a budgetary analysis system. It will analyze how well the Department is using its 5.9-billion-dollar annual expenditure. To do so, it will need to know the goals of the Department, what work is being done, and the relationship of that work to the money spent.

For each budget work project, indicators will be established to serve as barometers of how effectively the work is being done. Indicators or standards for some types of work have already been established—in industry and in government—and will be used for the work to which they apply. This program will be set up first. Indicators for work that is unique to the Department will be based on estimates furnished by Department managers of what the standards should be. Experience with the system will furnish another basis for establishing standards.

Once the indicators of effective accomplishment of work are known, items that will measure the rate or degree of progress can be identified. These items will then be related, by a mathematical model, to the employees and dollars performing the actions that cause progress. The dollars spent for progress made can be related to the total dollars available and the objectives to be accomplished. This relationship will indicate one of three things: That the objective will be accomplished, that it will not be accomplished, or that it will be exceeded. In other words, it will indicate that the available dollars are enough to accomplish the objective, are not enough, or are too much.



Somewhat the same procedure can be used to project the probable effect of applying dollars and employees to accomplishment of objectives. That is, we can project what accomplishment will be with more or less dollars. In this way, we can compute, before we spend the dollars or apply the efforts of employees, how effectively the work will be done.

As the program objectives are accomplished, the dollars spent, and employee's time applied, the rates of accomplishment can be related to provide an analysis of management effectiveness.

GAME will be very useful in budget preparation. With the gaming model, the dollars and employees needed to accomplish a program can be computed. The computer can even compute the relative value of various programs, based on the degree of accomplishment for dollars and employee effort expended. But there are intangible considerations in determining relative value and the final decision will be one

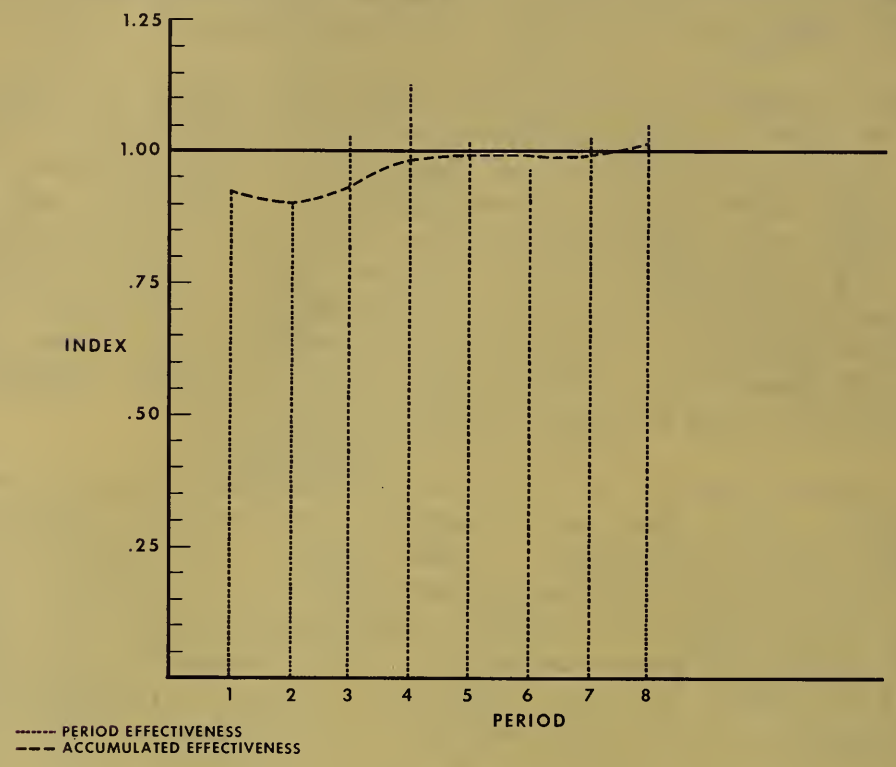
for the Secretary to make. After decisions have been made about certain programs, the fixed amounts for some objectives and fixed accomplishments for others can be entered into the computer and the effect on the remaining objectives can be computed.

Accumulated effectiveness index

versus

Expected accomplishment index (100)

GRAPHIC PRESENTATION OF EFFECTIVENESS OF PROGRAMS COMPLETED



Some examples of what will be accomplished by GAME are:

Standards will be evaluated by actual experiences. A quality control mathematical model—using statistical analysis techniques—will recommend the standards to be used.

Reports of unusual effectiveness or abnormal deviations will be generated by the computer.

Inquiries can be made to the computer about the status of a particular program. Or, the computer can be told to watch selected programs and either report periodically or to report minor deviations.

Management effectiveness reports will contain details of program and employee costs for the current period, as well as accumulated effectiveness.

If initial program objectives or standards are unrealistic, they can be adjusted. After any adjustment is entered, the program's condition will be evaluated again.

If as a result of the management effectiveness reports, a change in the application of money to objectives is to be considered, the computer will project, on request, the probable effect on the accomplishment of program objectives.

When the budget is being prepared, the cost of accomplishing program objectives can be projected. This will be evaluated by the Secretary. If he decides that the cost needed to accomplish an objective exceeds the value he places on accomplishment, the computer will be used to indicate the effect of reducing the total cost. Then the computer can evaluate the total results of adjusting the objectives and the costs.

This can furnish guidelines in budget preparation.

Program trends will be analyzed by a mathematical model to find out which programs are declining and which ones are increasing.

This management effectiveness area, using data on budget, expenditures, work progress, and management decisions, thus will provide information on how well the Department's objectives are being accomplished. It will evaluate the **M**anagement of **O**bjectives with **D**ollars through **E**mployees.

ISSUING CHECKS

INSTALLATION

In considering the installation of the proposed system, three questions had to be answered: Is the proposed system economically feasible? How should it be financed? How should conversion from the present system be made?

Is it economically feasible?

To answer this question, the cost of the present system—as it now exists—was determined. Then the cost of the system—as it will exist—was calculated. The difference gives in one amount the value from system design and the value of using a computer. The true value of an automatic data processing system is in the design taking full advantage of a computer—both in the manual processing of the input and output and in the computer processes.

Cost of the present system for the fiscal year 1961 was obtained by questionnaire from offices doing the work—payroll, personnel, and budget. When actual costs were not available, knowledgeable estimates were furnished. The costs developed for the present system represent conservative estimates.

For the proposed system, the costs were calculated:

> The operation of the Management Data Service Center in New Orleans was costed on the basis of established payroll methods, rather than on possible improvements.
>
> Computer costs were calculated on the assumption that input would be created by punching cards—rather than using optical scanners.
>
> The cost of hours used on computers includes a charge for amortization of the purchase price of the owned computer. This system then will bear the same charge as all other transactions.

Every effort was made to calculate a conservative estimate of the cost of the proposed system.

The result is an estimate that the proposed system can reduce costs by 1 1/2 million dollars a year. The annual cost per employee—$46—can be reduced to $31.

Full realization of this cost reduction depends on the use made of the 245 man-years freed by this system. If used constructively, the value will be material.

As stated by the Cost work group, "It is economically feasible to adopt the proposed system."

How should it be financed?

Two areas of costs need financing—development of the system and the operation of the fully implemented system.

The cost of development will approximate a million dollars. The Agricultural Stabilization and Conservation Service will use existing automatic data processing staffs to do the research and development needed to implement the system. This will be done on a reimbursable basis under agreement with the Management Data Service Center, MDSC. A cadre of employees will be required at the MDSC to assist in development and prepare for the operation.

After the system is installed, operating capital will be needed. Several methods of financing are available. The use of the Working Capital Fund is preferable.

Agencies and offices of the Department will share the expense of this system on a per capita basis. No attempt will be made to distribute cost reduction on the per capita basis—each organization will benefit to the extent of the use made of the man-years freed.

1961
1962
1963

How should conversion be made?

The change from the present system can be made in stages over 3 years.

During the first year, the system for the business programs will be developed. This will involve coordination of the system with the agencies and offices of the Department, writing procedures on document flow and processing, and designing input and output documents. It will also include problem definition, programming, and testing.

Existing documents will be used as test data. After the tests, records for about 5,000 employees will be used for the initial conversion. Batches of about 10,000 will be converted biweekly. By the end of 6 months of the second year, conversion for all employees should be completed.

Also during the first 2 years, the system for mathematical programs will be developed. Included will be the building of mathematical models and problem definition, perfection of valid employee appraisals and tests and indicators of management effectiveness, programming, and testing.

The programs for the Management of Human Resources will be installed by occupation. The programs for the Gaming Analysis for Management Effectiveness will be installed by agency. Both programs will be put in operation during the third year.

EVALUATION

An evaluation of a proposed system is made up of results, considerations, and recommendations. Results tell what will happen when the system is installed, considerations answer some of the questions about the system, and recommendations state the areas for decision.

Results

General

Because it is integrated, the system will use the same data for personnel, payroll, and budget reports, rather than data from three separate sources. In this way, the system will lower the cost of administrative support by 1 1/2 million dollars a year. It will supply reports that apply to the same effective dates. It will supply reports that are current.

Special reports can be obtained quickly and economically. Thus, management can obtain actual data needed to meet special problems; at present management has to use estimates because of the costs and delays involved in getting information.

Professional, technical, and administrative employees can be relieved of some clerical work. This will increase the man-hours available for their more substantive work.

Personnel

Because the areas of competition will be increased, employees will have greater opportunities to advance. Areas now are sometimes limited to organizational groupings.

Employees also will be helped to develop through analyses that will determine training needs or will identify progress that merits promotion.

Personnel managers will be better able to select employees who should be retired, identify employees who should have an assignment change, and find employees who have special skills.

Turnover rates can be related to supervisory traits, training efforts, and source of new employees. Thus, supervision can be improved, training applied more effectively, and recruiting efforts concentrated.

Greater job satisfaction for employees can result from relating supervisors and prospective employees.

Evaluation of employees can be more equitable by considering supervisor standards.

Leave analyses can detect employee problems in working conditions.

Employment needs of the Department can be projected several years in advance. This can be used to concentrate recruitment efforts more effectively.

Analysis of military status can project the effect of possible manpower releases.

Payroll

The number of reports prepared will be reduced by over 17,000 each year.

The number of payroll offices will be reduced from 87 to 1.

The effect of any pay increases can be computed and projected quickly and accurately.

The processing of the input at one location will facilitate using optical scanners because the volume will be large. This can effect a further reduction in cost.

The transfer of employees from one organization of the Department to another will be simplified; six of the documents now required will be eliminated.

Addressograph plates or punched cards now maintained by the Treasury Department will no longer be required.

The 96,000 individual retirement records will no longer be posted by hand.

Budget

Exact costs of administrative support will be available currently and will provide an effective means of detecting errors in reporting, misunderstandings of reporting requirements and higher than normal costs. A more exact and a lower cost of administrative support will result.

Through inclusion of identification on time reports, the exact cost of a specific operation within personal services will be obtained on a period or a continuing basis.

If money and employees are not used as planned, the trend will be reported as it occurs.

Changes in pay—normal or by Congressional action—will be projected by allotment or subaccount.

Management Effectiveness

Deviations from normal accomplishments will be reported currently.

The effect of adjustments in the application of money and employees will be projected.

Proposed budgetary adjustments will be evaluated in terms of effectiveness in accomplishing objectives.

Considerations

Many questions about the proposed system arose while it was being designed. Some of the more significant ones are discussed here.

General

Consideration: Can some agencies be left out?

Answer: No. Although some costs can be reduced with only part of the employees in the system, realization of the full value of the system to employees and management requires that all be included.

Consideration: Why aren't mark-sense cards, optical scanners, and wire transmission recommended?

Answer: For two reasons—reliability and cost in time and money. Reliability of systems using punched cards, magnetic tape, and the 705 III and 7070 has already been established by the Department's own experience. By using the Department's present equipment, the time and money that would be needed to obtain experience on other equipment can be saved.

Consideration: Does that mean the other equipment won't be used?

Answer: No. Any equipment available at the DPC's will be used—if it is feasible and economic to do so.

Consideration: Is the mailing of magnetic tape safe?

Answer: Yes, entirely. The Department has successfully mailed this tape extensively in the last 2 years.

Consideration: Were other computers in the Department considered?

Answer: Yes. The several card 650's, the Univac II, and the tape 650 were considered.

Consideration: Why are parallel operations not provided?

Answer: Various tests of computer programs have shown that it is more productive to concentrate efforts on operating the new system than to spread the effort to operate two systems at the same time.

Consideration: Has the cost of developing procedures for the proposed system been considered?

Answer: Yes. A cadre of 17 people has been provided at the Management Data Service Center. Development of procedures will be included in their duties.

Consideration: Because charges will be on a per capita basis, couldn't one agency get more service than another?

Answer: For any one pay period, this is true. One agency might have more transactions, inquiries, pay changes, and personnel actions. Over a longer time, the per capita basis should be representative.

Consideration: If an employee's job is eliminated by the system, will the employee lose his job?

Answer: No. A position will be found for every such employee. With a turnover rate of 2% per month, the small number of employees directly affected can be absorbed within the Department.

Payroll

Consideration: With the computer in New Orleans, won't mailing of the checks take longer?

Answer: No. The magnetic tape will be mailed to the Treasury disbursing office which now issues the checks. The check mailing time will be the same.

Consideration: What if my time and attendance clerk forgets to report on me, will I miss my check?

Answer: Not usually. If you have been working for awhile, your retirement account or annual leave will be enough to let your check be issued at the usual time.

Consideration: Will additional reports—besides those now made—be required to get budget activity and work units recorded?

Answer: No. The present form or a modification can be used. The same information will not be reported twice.

Consideration: Will everyone use a punched-card time and attendance report?

Answer: No. If budget activity or work units are to be reported, time and attendance forms will be provided so that the additional data can be recorded.

Consideration: Will the computer pick the employees who are to be promoted? Personnel

Answer: No. For in-grade promotions, the computer will follow the rules and — unless told not to—will record the increase in pay.

Consideration: What about other promotions —will the computer make the selection then?

Answer: No. The supervisor will ask for the names of say five employees. Then the computer will select the five best qualified.

Consideration: Will all of the Department's employees in a town be considered—even if they work for different agencies?

Answer: Yes. The computer will select on merit; it will not discriminate.

Consideration: Who will be included in the Manpower Inventory?

Answer: Employees in occupations selected by the Office of Personnel after consultation with the agencies of the Department.

Consideration: Who will develop the appraisals and tests?

Answer: Professional employees assigned to the Office of Personnel.

Consideration: Will the retirement master tape be used to compute an employee's retirement pay?

Answer: No. This is used primarily to produce the Individual Retirement Record.

Consideration: Will the system require more budget reports? Budget

Answer: No. Actually, it will require fewer, overall. Some of the time and attendance reports will include data on allotment, budget activity, and type of work. In such cases, that information will not have to be compiled separately.

	Consideration:	Will provision be made for adjusting planned use of money and employees?
	Answer:	Yes, adjustments are expected.
	Consideration:	If money and employees are being used other than as planned, how soon will the Secretary know?
	Answer:	The trend will be detected the first pay period. It can be investigated at any time after that.
Management Effectiveness	Consideration:	Who will select the standards for judging effectiveness?
	Answer:	The indicators will be established by managers of the Department. The rates or measures of accomplishment will be developed from experience—present experience in industry and Government.
	Consideration:	What will be used if there are no standards now?
	Answer:	At first, estimates of managers. Later, experience from operating under the system.
	Consideration:	How will the value of accomplishing one objective be compared with that of another?
	Answer:	It won't. What will be compared will be the effectiveness that results from operations and a projection of effectiveness that would result from changes in the use of money and employees.
	Consideration:	Does this mean that more money or less money will be needed by the Department?
	Answer:	The system in itself will not control that. The objectives of the Secretary and actions of the Congress control the amount of money.
	Consideration:	What does this area of the system accomplish?
	Answer:	It provides the Secretary with a tool for evaluating alternate decisions of money and employees to be used to accomplish specific objectives.

It provides a means of analyzing the degree of manpower effectiveness in accomplishing the Secretary's objectives.

Recommendations

General

It is recommended that this system be approved for all agencies and offices of the Department; that all employees now paid by checks issued from Treasury disbursing offices be included in the payroll and personnel statistics operations; and that the Office of Personnel, after consulting with the agencies and other offices, determine the employees to be included in the Manpower Inventory.

Before Installation

The concurrence from the Director of the Bureau of the Budget should be requested on the proposal to finance the effort through the Working Capital Fund. Also, it will be necessary to obtain the Director's approval of proposed amendments to the law and to provide for advances to the fund.

Arrangements should be made for discussions with appropriate Congressional Committees and individual members of the Congress.

Employees whose positions are eliminated by the system should be given every opportunity to qualify for new positions created by the system. Special training should be provided for employees who have the aptitude and desire to enter this new field of work. Negotiations should be entered into with the Civil Service Commission for waivers of qualification requirements in order to facilitate reassignments.

To facilitate reassignment, offices having positions that will be affected should begin filling vacancies through temporary appointments.

An agreement should be negotiated with the Agricultural Stabilization and Conservation Service covering services to be performed at Data Processing Centers.

The Management Data Service Center should be established and staffed with the cadre of 17 employees.

A system should be developed and installed to accurately determine the cost of administrative support activities.

A system should be devised and installed for obtaining the exact cost of the activities that will be accomplished by the proposed system.

Responsibility should be assigned to develop valid employee appraisals and tests and indicators of management effectiveness.

The Civil Service Commission, Bureau of the Budget, and the General Accounting Office should be advised of the details of the proposed system.

After Installation

Optical scanners, if available at the New Orleans DPC, should be considered as a means of reducing the cost of the system input.

The cost of the system should be determined, just as costs of the previous system were obtained. The cost data should be used to prepare a comparative cost study.

The managerial needs for personnel services furnished from 130 offices should be evaluated. The location and composition of personnel offices should be determined.

Consideration should be given to authorizing all supervisory officials to document the classification of positions and the selection of personnel.

Consideration should be given to providing physical examinations for all personnel above an established age, at certain grade levels, and in selected occupations.

Competitive areas for promotions and reductions-in-force should be established on a geographic rather than organizational basis.

The Department's policy on making lists of employees available for possible external placement should be considered.

Consideration should be given to using controlled "training in depth" to reduce costs of providing supervisory replacements.

The Department should request the use of an unfunded account with the Treasury account for use exclusively for personal services. Agencies would transfer funds to this account. The Department's payroll would be charged to one account instead of 87 different ones.

The Department, in cooperation with the Treasury Department, should try to develop simplified formulas, acceptable to the States, for computing withholdings for State income taxes.

Consideration should be given to having the time and attendance clerks keep the leave documents that support the time and attendance reports. This would materially reduce the clerical processing cost at the Management Data Service Center.